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INTRODUCTION

The Operators' List is a compilation of information relating to mines and processing facilities in Canada. This information was obtained primarily, as in previous years, by means of a questionnaire sent to all the companies concerned.

In former years, the results of the surveys were published in a series of three Operators' Lists. However, this year the three lists have been combined into one report in the hope of better serving the users' needs.

PART 1 **Metal and Industrial Mineral Mines and Processing Plants in Canada** lists significant information concerning Metals Mines and Processing Plants (Section 1), Industrial Mineral Mines and Processing Plants (Section 2) and Lime Producers (Section 3) in Canada. This information includes, as of January 1, 1981, the name of the operator, location of the mine or plant, its capacity, processes, products and other details of special interest.

Part 2 **Metallurgical Works in Canada, Nonferrous and Precious Metals** lists the principal metallurgical works in Canada as of January 1, 1981, that treat ores and concentrates of nonferrous and precious metals. Not listed are those companies that basically refine scrap and other secondary materials, foundries, base-bullion gold refineries associated with mines, and fabricating plants.

PART 3 **Metallurgical Works in Canada, Primary Iron and Steel** lists in detail the facilities, productive capacities, products and other data of companies that comprised the primary iron and steel industry in Canada as of December 31, 1981. There are also separate sections on the steel pipe and tube industry and the iron powder and ferrite industry.

The cooperation of all those companies who contributed information and the individuals who assisted in the revision of the Operators' List is greatly appreciated.

ABBREVIATIONS

Conc	Concentrate
S	Solution mine
Twp.	Township
U	Underground mine
O	Open pit or quarry
tpy	tonnes per year

Metric Conversion Factors

1 tonne	=	1.1023 short tons
1 tonne	=	0.9842 long tons
1 m	=	1.0936 yard
1 g	=	0.0321 oz (troy)

PART 1

METAL AND INDUSTRIAL MINERAL MINES AND PROCESSING PLANTS IN CANADA

METAL MINES AND PROCESSING PLANTS

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
NEWFOUNDLAND AND LABRADOR						
ASARCO Incorporated Buchans Unit, Buchans, Newfoundland AOH 1GO	Buchans, Grand Falls District/U	1927	1 130	Flotation	Copper conc, zinc conc, lead conc	Copper, lead and zinc conc all shipped to USA; conc contain silver, lead and gold.
Consolidated Rambler Mines Limited P.O. Box 937 Saint John, New Brunswick E2L 4E3	Ming Mine, Baie Verte/U	1964	1 360	Flotation	Copper conc	Conc containing gold and silver shipped to Noranda Mines Limited, Noranda and Mines Gaspé (a division of Noranda Mines), Murdochville, Quebec.
Iron Ore Company of Canada Sept-Îles, Quebec G4R 4L5	Labrador City/O	1962 1973 Expanded	145 000 Feed crude ore	Spirals and magnetic separators, pelletizing	Iron ore conc and pellets	19 137 000 tonnes of conc and 10 323 000 tonnes of pellets produced annually.
Newfoundland Zinc Mines Limited P.O. Box 70 Daniel's Harbour, Newfoundland AOK 2CO	Newfoundland Zinc Mine, Daniel's Harbour/U	1975	1 500	Flotation	Zinc conc	Conc shipped to AMAX Inc. and Metallgesellschaft A.G.
Pickands Mather & Co. Wabush Mines Wabush, Labrador AOR 1BO	Scully Mine, Wabush, Labrador/O	1965	16 700 (iron ore conc)	Crush and grind specular hematite; conc	Iron ore conc	Conc shipped to Pointe Noire for pelletizing; iron ore pellets are shipped to steel plants of participating companies: Stelco Inc., Dofasco Inc., Jones & Laughlin Steel Corporation; Inland Steel Company; Interlake, Inc., Wheeling-Pittsburgh Steel Corporation; Finsider of Italy; Pickands Mather & Co.
NOVA SCOTIA						
Canada Wide Mines Ltd. (Gays River Division) P.O. Box 59 Milford Station, Nova Scotia BON 1YO	Gays River Mine, Colchester, Halifax County/U	1979	47 000 tpy lead 18 000 tpy zinc	Flotation	Lead conc zinc conc	Production started in November 1979.

Yava Mines Limited 40 St. Clair Street West Suite 808 Toronto, Ontario M4V 1M2	Silver mines	1979	600		Lead conc	
NEW BRUNSWICK						
Brunswick Mining and Smelting Corporation Limited P.O. Box 3000 Bathurst, New Brunswick E2A 3Z8	No. 6 Bathurst/O No. 12 Bathurst Gloucester County/ U	1966 1964	10 000	Flotation	Zinc conc, lead conc, copper conc, bulk conc	Zinc conc shipped to Société Générale des Minerais, SA., Belgium; Canadian Electrolytic Zinc Limited, Valleyfield; and others; lead conc to company's smelter at Belledune; copper conc to Noranda Mines Limited (Mines Gaspé Division) at Murdochville, Quebec.
Consolidated Durham Mines & Resources Limited 916 - 111 Richmond Street West Toronto, Ontario M5H 2G4	Lake George Mine, Prince William/U	1971	360	Flotation	Antimony conc	Amalgamet Canada Limited is sale agent for the antimony conc; conc exported.
Heath Steele Mines Limited P.O. Box 400 Newcastle, New Brunswick E1V 3M5	55 km NW of Newcastle, Northumberland County/ U	1957 1975 Expanded	4 000	Flotation	Copper conc, lead conc, zinc conc	Zinc conc shipped to Canadian Electrolytic Zinc Ltd., Valleyfield, Belgium, Italy and West Germany. Copper conc shipped to Mines Gaspé (a division of Noranda Mines Limited), Murdochville and Noranda Mines Limited, Noranda, Quebec; lead conc shipped to Italy, West Germany and Belgium; conc contain minor amounts of silver and gold.
QUEBEC						
Agnico-Eagle Mines Limited (Gold Division) 300 - 365 Bay Street Toronto, Ontario M5H 2V1	Joutel Twp./U	1974	1 200	Flotation, cyanidation	Gold and silver bullion	

Type - type of mine; * tonnes per day unless otherwise indicated; - Nil; .. Not available.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Belmoral Mines Ltd. P.O. Box 7000 Val d'Or, Quebec J9P 5K3	Ferdeber Mine, Bourlamaque Twp.	1981	1 100	Flotation cyanidation	Gold bullion	Gold bullion shipped to Royal Canadian Mint, Ottawa.
Bras d'Or Mines Ltd. P.O. Box 7000 Val d'Or, Quebec J9P 5K3	Bourlamaque Twp.	..	..	..	Gold bullion	Ore milled at Belmoral mill.
Camchib Resources Inc. P.O. Box 3400 Chibougamau, Quebec G8P 2K9	Original Mine, Obalski Twp./U	1955	2 500	Flotation	Copper-gold conc	Copper and gold ore from Henderson and Cedar Bay mines. Gold ore from Gwillim mine.
	Original Mine, Obalski Twp./U	1980	200	Cyanidation	Gold bullion	
	Cedar Bay Mine, McKenzie Twp./U	..	..	Same	Copper ore	
	Henderson Mine, Roy Twp./U	..	..	Same	Copper ore	
	Gwillim Mine	..	..	Same	Gold ore	
Camflo Mines Limited P.O. Box 640 Malartic, Quebec JOY 1ZO	Malartic and Fourniére Twp./U	1969	1 250	Cyanidation	Gold bullion	Gold bullion bars are shipped to Royal Canadian Mint, Ottawa, for refining.
Corporation Falconbridge Copper (Lake Dufault Division) P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Millenbach Mine, Dufresnoy Twp., Noranda/U	..	..	Flotation	Copper and zinc ore	Ore from the Millenbach and Corbet mine is trucked 5 km to the Norbec mill for treatment; copper conc shipped to Noranda; zinc conc shipped to Valleyfield and St. Joe Minerals Corporation, USA; copper conc contain gold and silver. Millenbach mine will be mined and closed August 1981.
	Corbet Mine, Duprat Twp., Noranda/U	..	..	Flotation	Copper and zinc ore	
(Opemiska Division)	Cooke Mine, Springer Mine, Perry Mine, Levy Twp., Chapais/U	1953	2 800	Flotation	Copper conc	Conc containing gold and silver shipped to Noranda.
Darius Gold Mines Inc. Cadillac, Quebec JOY 1CO	Cadillac/U	1978	180	Cyanidation	Gold bullion	

El Coco Explorations Ltd. P.O. Box 7000 Val d'Or, Quebec J9P 5K3	Dasserat Twp.	..	..	..	Gold bullion	Ore milled at Belmoral mill.
Iron Ore Company of Canada Sept-Îles, Quebec G4R 4L5	Schefferville/O	1954	85 000 crude	Crush, screen goethite, limonite, iron ore, hematite	Direct shipping iron ore and plant feed	Ore from eight open-pit mines is crushed and shipped to Sept-Îles for both direct shipment and pelletizing.
	Beneficiating plants Sept-Îles	1973	19 000	Flotation, pelletizing	Iron ore pellets	Low grade crude from Schefferville is beneficiated and pelletized at Sept-Îles.
Lamaque Mining Company Limited Val-d'Or, Quebec J9P 4N8	Val-d'Or/U	1935	2 000	Cyanidation	Gold bullion	Gold bullion bars are shipped to Johnson Matthey, Inc., Brampton, Ontario for refining and then sold to Mocatta Metals Corporation.
Lemoine Mines Limited 1401 - 7 King Street East Toronto, Ontario M5C 1A6	Lemoine Mine, Lemoine Twp./U	1976	360	Flotation	Copper conc, zinc conc	The copper conc containing some gold and silver is shipped to Noranda. The zinc conc is shipped to Europe. Lemoine Mines is a wholly-owned subsidiary of Patino Mines (Quebec) Limited.
Long Lac Mineral Exploration Limited P.O. Box 156 Royal Bank Plaza Toronto, Ontario M5J 2J4	Bousquet Mine, Bousquet Twp./U	1979	..	..	Gold ore	Ore is trucked at the rate of 16 920 tonnes per month to Les Terrains Aurifères Malartic (Québec) Limitée for milling. Started July 1979.
	Doyon Mine Bousquet Twp/O	..	..	..	Gold ore, silver ore	Currently shipping to Les Mines Est-Malartic Ltée custom mill and Noranda smelter as flux.
Louvem Mining Company Inc. 1710, 1000 Sherbrooke St. West Montreal, Quebec J9P 4P8	Manitou Division, Bourlamaque Twp./O	1942	900	Flotation, cyanidation	Zinc, lead conc, silver-gold precipitate	Underground operation ceased in November 1978. Manitou ore depleted in June 1979. Custom milling gold ore from Belmoral Mines ended May 1980.
	Louvicourt Division, Louvicourt Twp./U	..	..	..	Copper-zinc-silver-gold ore	Mine was maintained on standby in 1978. Resumed development work underground in May 1979; production to resume in January 1980.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Louvem Mining Company Inc. (cont'd)	Chimo Mine	..	..	..	Gold ore	Since March 1981, work has commenced on the old "Chimo Gold Mine" on which an option was obtained in 1978.
Madeleine Mines Ltd. P.O. Box 416 Ste. Anne des Monts, Quebec G0E 2G0	Boisbuisson and Lapotardière Twps., Gaspé/U	1969	2 500	Flotation	Copper conc	Operations were suspended December 1976 and reinitiated July 2, 1979.
Mines Est-Malartic Ltée, Les Suite 2105, North Tower, P.O. Box 156 Royal Bank Plaza Toronto, Ontario M5J 2J4	East Malartic Mine, Fourniére Twp., Malartic/U	1938	1 680	Cyanidation	Gold bullion	Mine closed in September 1979, when the mill ceased treating its ore and that of nearby Barnat mine. Mill then treated custom ore. Gold bullion bars shipped to Royal Canadian Mint, Ottawa for refining.
	Barnat Mine, Fourniére Twp., Malartic/U	..	..	..	Gold ore	Mine closed in September 1979 and reopened a month later, on salvage basis. Prior to closure its ore was treated at nearby East Malartic mill, and since reopening has been shipped to Les Terrains Aurifères mill at 250-500 tpd.
Noranda Mines Limited (Mines Gaspé Division) P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Copper Mountain Mine/O Needle Mountain Mine/U Holland Twp., Murdochville	1955 1973 expanded	33 000	Flotation, smelting	Copper conc, molybdenite conc	Copper conc processed in the company's smelter; the conc contains silver, selenium, tellurium, bismuth; the smelter produces copper anodes which are refined at Canadian Copper Refiners Limited, Montreal East; molybdenite conc marketed through Noranda Sales (1961) Ltd., a subsidiary of Noranda Mines Limited. Construction of oxide leaching plant completed late 1975, and the precipitation plant was revised in late 1976.

Noranda Mines Limited (Matagami Division) P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Mattagami Lake Mine, Matagami/U	1963	3 500	Flotation	Copper conc, zinc conc	Treats ore from its mines. Copper conc shipped to Noranda; zinc conc shipped to Canadian Electrolytic Zinc Limited, Valleyfield, Quebec.
	Orchan Mine/U	1963	1 700	..	Zinc-copper ore	Ores from Orchan, Norita and Radiore No. 2 mines crushed and ground at Orchan and pulp pumped to Mattagami Lake concentrator for processing. Orchan mill idle since second quarter of 1979.
	Norita Mine/U	..	..	..	Zinc-copper ore	Ore trucked at 900 tpd to Orchan for crushing and grinding and pulp pumped to Mattagami Lake concentrator.
	Radiore No. 2/O	..	..	..	Copper-zinc ore	Mining started in latter part of 1979, with small shipments to Mattagami Lake via Orchan.
Noranda Mines Limited (Horne Division) P.O. Box 4000 Noranda, Quebec J9X 5B6	Horne Mine, Rouyn Twp., Noranda/O	1928	2 000	Flotation, smelting	Gold ore, copper-zinc ore	Ore reserves mined out July 1, 1976 and mine closed. Custom milling and smelting operations continue. Mill treats slag from the Noranda continuous process reactor, gold ore from Chadbourne mine, and copper-zinc ore from Les Mines Gallen. Custom copper-gold conc and recycled materials are treated in the company's smelter to produce copper anodes. These are shipped to Canadian Copper Refiners Limited, Montreal East for electrorefining.
	Chadbourne Mine, Rouyn	..	..	..	Gold ore	
Patino Mines (Québec) Limited 1401 - 7 King Street East Toronto, Ontario M5C 1A6	Copper Rand Mine, McKenzie Twp., Chibougamau/U	1959	2 580	Flotation	Copper conc	Copper Rand Mine has mill at mine site. Most mill feed from Copper Rand Mine except for limited tonnage of development ore from Portage Mine.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Patino Mines (Québec) Limited (cont'd)	Portage Mine, Roy Twp./U	..	..	..	Copper ore	Portage Mine was on standby from 1974 to 1979 when it reopened for exploration. In 1980, exploration continued, as well as stope preparation and some production. Increased production planned for 1981.
Pickands Mather & Co. Wabush Mines (Pointe Noire Division) Pointe-Noire, Quebec G4R 4L4	Pelletizing Plant, Pointe-Noire	1965	17 000 (pellets)	Pelletize specular hematite-magnetite iron ore	Iron ore pellets	Conc from Scully Mine of Wabush Mines in Labrador; iron ore pellets are shipped to steel plants of participating companies: Stelco Inc., Dofasco Inc., Jones & Laughlin Steel Corporation; Inland Steel Company; Interlake, Inc. Wheeling-Pittsburgh Steel Corporation; Finsider of Italy; Pickands Mather & Co.
Quebec Cartier Mining Company Port-Cartier, Quebec G5B 2H3	Mount Wright/O	1975	18.7 million tonnes of conc/year	Autogenous grinding with spiral separation	Hematite conc	Iron ore conc shipped to world markets and the parent company, United States Steel Corporation.
QIT-Fer et Titane Inc. P.O. Box 560 Sorel, Quebec J3P 5P6	Mine at Lac Tio, wharf at Havre St. Pierre/O Mill and treatment plant at Tracy	1950	2 500 000 tonnes of ilmenite ore/year 601 000 tonnes of pig iron/yr 865 000 tonnes of titania slag/yr	Spirals and cyclone concentrators, roasting, smelting	Ilmenite conc, pig iron, titania slag	Mined ilmenite ore is crushed at Lac Tio; the plant at Tracy beneficiates the ore and extracts the metal products by roasting and smelting.
Services TMG Inc., Les P.O. Box 70 3400 chemin-du-Columbium Saint-Honoré Chicoutimi, Quebec G0V 1L0	Saint Honoré (Martel/U)	1976	2 300	Flotation	Pyrochlore conc	All conc (60% Cb_2O_5) is exported on long-term contract.

Sidbec-Normines Inc. 440 rue Dorchester Ouest Montreal, Quebec H2Z 1V7	Fire Lake Mine/O	..	..	..	Iron Ore	Crushing plant and stockpile facility at mine site. Hematite ore shipped by rail for beneficiation at Gagnon. Plant and mine purchased on January 1, 1977 from Quebec Cartier Mining Company which manages the operation.
	Lac Jeannine, Gagnon	1961	6 000 000 tpy conc	Autogenous grinding with spiral separation	Hematite conc	Mine closed down mid-1977. Concentrator, purchased in 1977 from Quebec Cartier Mining Company, treats ore railed from Fire Lake Mine and is managed by Quebec Cartier. Conc is pelletized at Port Cartier and shipped to Sidbec's direct reduction furnaces at Contrecoeur. Standard blast furnace pellets are shipped to British Steel Corporation and others.
Sigma Mines (Quebec) Limited Val-d'Or, Quebec J9P 4N8	Bourlamaque Twp., Val-d'Or/U	1937	1 270	Cyanidation	Gold bullion	Gold bullion bars are shipped to the Royal Canadian Mint, Ottawa, for refining and subsequently sold on free world markets.
Terrains Aurifères Malartic (Québec) Limitée, Les Suite 2105 North Tower P.O. Box 156 Royal Bank Plaza Toronto, Ontario M5J 2J2	Halet, Fournière Twp.	1949	1 500	Cyanidation	Gold bullion	Mill treats custom ore from Bousquet and Barnat mines and the Silverstack property. Gold bullion bars shipped to Royal Canadian Mint, Ottawa, for refining.
ONTARIO						
Agnew Lake Mines Limited Box 91 Commerce Court West Toronto, Ontario M5L 1C7	Hyman Twp. Espanola/U	1977	453 600 kg/year	Leaching	U_3O_8	Underground mining operations ceased in May 1980. Leaching process continuing.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
Agnico-Eagle Mines Limited (Silver Division) 300 - 365 Bay Street Toronto, Ontario M5H 2V1	Temiskaming Mine Coniagas Mine Coleman Twp., Cobalt/U	1951	360	Jigs, tables, flotation	Silver conc	Concentrates shipped to Canadian Smelting & Refining (1974) Limited, Cobalt, Ontario.
Algoma Steel Corporation, Limited, The (Algoma Ore Division) Wawa, Ontario P0S 1K0	George W. MacLeod Mine, No. 30 Twp., Wawa/U	1946 1939	8 100 tonnes heavy media ore 2.1 x 10^6 tonnes of sinter/year	Heavy media separation of siderite followed by sintering	Sintered iron ore	Siderite from the mine is sintered after concentration by the sink-float process. Crushed limestone is added to the sinter mix to provide blast furnace flux. The Algoma Central Railway carries the sinter to the Algoma Steel plant at Sault Ste. Marie.
Caland Ore Company Limited Atikokan, Ontario P0T 1C0	Atikokan/O	1960 mine; 1965 pellet plant	1 100 000 tonnes/year (pellets)	Screening, pelletizing	Coarse iron ore, Iron ore pellets	Mining operations ceased November 1979. Pelletizing ceased 1980.
Campbell Red Lake Mines Limited 600 - 365 Bay Street Toronto, Ontario M5H 2V9	Balmer Twp., Balmertown/U	1949	1 000	Amalgamation, flotation, cyanidation	Gold bullion	Gold sold on open market.
Canadaka Mines Limited 301 - 2161 Yonge Street Toronto, Ontario M4S 3A6	Coleman Twp., Cobalt/U	1976	450	Gravity flotation	Silver	Conc shipped to Canadian Smelting & Refining (1974) Limited in Cobalt for refining.
Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Haley/O	1942	12 500 Magnesium 1 000 Calcium 100 Strontium	Calcining, reduction, refining, melting, casting, extruding	Magnesium, calcium, strontium	Dolomite is mined in an open pit and calcined in rotary kiln. Magnesium is thermally reduced from the calcined dolomite using ferrosilicon as the reducing agent. The reaction is carried out in retorts evacuated to a very low pressure. The retorts are heated by electric power or by natural gas. The condensate is melted and cast

						into ingots. The magnesium thus produced is very pure, nominally 99.95%. Calcium is produced by a similar process from purchased raw material.
Cliffs of Canada Limited P.O. Box 877 Kirkland Lake, Ontario P2N 3K7	Adams Mine, Boston Twp., near Kirkland Lake/O	1965	1 220 000 tonnes of pellets/ year	Magnetic separation, flotation	Iron ore pellets	The mine is owned by Dofasco Inc. Magnetite is concentrated by magnetic separators, the conc is cleaned by flotation to remove silica; the finished conc is pelletized and the iron ore pellets are shipped to Dofasco's steel plant.
Cliffs of Canada Limited P.O. Box 217 Temagami, Ontario POH 2H0	Sherman Mine, Temagami/O	1968	1 117 600 tonnes of pellets/ year	Magnetic separation	Iron ore pellets	Pellets are shipped daily to Dofasco Inc. via unit train.
Corporation Falconbridge Copper Sturgeon Lake Joint Venture P.O. Box 450 Ignace, Ontario POT 1T0	Boundary orebody Sturgeon Lake/O	1974	1 100	Flotation	Copper conc, zinc conc, lead conc	Zinc conc shipped to USA and Canadian Electrolytic Zinc in Valleyfield; copper conc containing silver to Noranda; lead conc to Cominco Ltd., Trail, B.C. Closed December 1980.
Denison Mines Limited P.O. Box 40 Royal Bank Plaza Toronto, Ontario M5J 2J4	Elliot Lake/U	1957	15 000	Acid leaching	Ammonium diuranate	Ammonium diuranate contains about 80% U_3O_8 (uranium oxide) equivalent.
Dickenson Mines Limited 1402 - 390 Bay Street Toronto, Ontario M5H 2Y2	Balmer Twp., Balmertown/U	1948	700	Amalgamation, cyanidation	Gold bullion	Gold bullion bars are shipped to Engelhard Industries of Canada Limited for refining.
	Robin Red Lake Mine, Balmer Twp./U	..	..	Same	Gold ore	Robin ore (90 tonnes/ day) is mined via Dickenson shaft and treated in the Dickenson mill. Gold is sold on the open market.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
Dome Mines, Limited South Porcupine, Ontario P0N 1H0	Tisdale Twp., South Porcupine/U	1912	1 800	Amalgamation, cyanidation	Gold bullion	Gold bullion bars are shipped to the Royal Canadian Mint, Ottawa, for refining.
Falconbridge Nickel Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Falconbridge Mine Falconbridge Twp./U	1933	2 700	Flotation	Nickel-copper conc	In 1980, the company operated six nickel mines in the Sudbury area: the Falconbridge, East, Strathcona, Lockerby, Onaping and North Mines operated all year. Ore from company mines is beneficiated in its mills to produce a nickel-copper conc; the conc is smelted to nickel-copper matte that is shipped to the Falconbridge refinery in Kristiansand, Norway, where the following metals are recovered: nickel, copper, gold, silver, platinum, palladium, iridium, rhodium, ruthenium and cobalt. Production of ore for Falconbridge Nickel Mines Limited was terminated in 1977.
	Strathcona Mine, Levack Twp./U	1968	7 600	Flotation	Nickel-copper conc	Mine operated throughout 1980.
	East Mine, Falconbridge Twp./U	..	..	Same	Nickel-copper ore	Mine operated throughout 1980.
	North Mine, Levack Twp./U	..	..	Same	Nickel-copper ore	Mine re-opened in 1980. Sold to Inco Metals Company 1980.
	Onaping Mine, Levack Twp./U	..	..	Same	Nickel-copper ore	Mine operated throughout 1980.
	Lockerby Mine, Denison Twp./U	..	..	Same	Nickel-copper ore	Mine operated throughout 1980.
	Fraser Mine, Levack Twp./U	..	..	Same	Nickel-copper ore	Under development.

Inco Metals Company Sudbury, Ontario POM 1NO	Copper Cliff Mill, Snider Twp.	1930	..	Flotation, magnetic separation	Copper, nickel and pyrrhotite conc	Two mills, Clarabelle and Frood-Stobie, beneficiate ores mined by the company in the Sudbury area. Levack mill closed down February 1978. Bulk conc is pumped to the Copper Cliff mill for separation into nickel, copper and pyrrhotite conc. The nickel conc and copper conc are pyrometallurgically reduced at Copper Cliff Smelter to produce impure copper and nickel metals. These are treated by company-owned refinery plants that recover 14 different elements for industrial use: nickel, copper, cobalt, sulphur, selenium, tellurium, silver, gold, ruthenium, rhodium, iridium, osmium, palladium and platinum. The pyrrhotite conc is treated at the company's iron ore recovery plant. Iron from pyrite and pyrrhotite conc makes the 15th element recovered from Sudbury ores. In September 1978, the union workers at the company's operations went on strike which did not end until June 3, 1979.
	Clarabelle Mill, Snider Twp.	1971	32 000	Magnetic separation, flotation	Nickel-copper and pyrrhotite conc	
	Frood-Stobie Mill, McKim Twp.	1967	20 000	Flotation	Nickel-copper conc	
	Levack Mill, Levack Twp.	1959		Magnetic separation, flotation	Copper, nickel and pyrrhotite concs	
	Iron Ore Recovery Plant, Walden	1955	630 000 leach magnetite tonnes/yr	Roasting, leaching	Leach magnetite, nickel oxide, sulphuric acid	The Iron Ore Recovery Plant treats nickeliferous pyrrhotite by roasting and kiln reduction and atmospheric leaching. The products are pure nickel oxide and leach magnetite. Sulphuric acid is recovered from the roaster off-gas. The pelletizing plant is operating below capacity, produc-

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
Inco Metals Company (cont'd)						ing 630 000 tonnes annually, because of environmental restraints.
	Clarabelle Extension Snider Twp./O	..	..	..	Nickel-copper ore	Put on standby 1977.
	Coleman Mine, Levack Twp./U	..	..	Flotation	Nickel-copper ore	
	Copper Cliff North Mine, Snider Twp./U	..	..	Same	Nickel-copper ore	Currently on standby. Backfill program complete.
	Copper Cliff South Mine, Snider Twp./U	..	..	Same	Nickel-copper ore	
	Crean Hill Mine, Denison Twp./U	..	..	Same	Nickel-copper ore	Operation suspended July 1978; mine placed on standby.
	Creighton Mine, Snider Twp./U	..	..	Same	Nickel-copper ore	
	Frood-Stobie Mine, McKim and Blezard Twps./U	..	..	Same	Nickel-copper ore	
	Garson Mine, Garson Twp./U	..	..	Same	Nickel-copper ore	
	Levack Mine, Levack Twp./U	..	..	Same	Nickel-copper ore	
	Little Stobie, Blezard Twp./U	..	..	Same	Nickel-copper ore	
	North Mine, Levack Twp./U	..	..	Same	Nickel-copper ore	Bought from Falconbridge Nickel Mines Limited and is part of Levack Mine.
	Shebandowan Mine, Hagey Twp./U	..	..	Same	Nickel-copper ore	
	Shebandowan Mill Hagey Twp.	1972	2 500	Flotation	Nickel-copper conc	

	Victoria Mine, Denison Twp./U	..	..	Same	Nickel-copper ore	Depleted and closed in 1977. In 1978, mine allowed to flood.
Kerr Addison Mines Limited P.O. Box 91 Commerce Court West Toronto, Ontario M5L 1C7	McGarry Twp., Virginiatown/U	1938	1 225	Cyanidation, flotation, roasting	Gold and silver bullion	Gold and silver bullion bars shipped to the Royal Canadian Mint, Ottawa, for refining.
Kidd Creek Mines Ltd. P.O. Box 175 Commerce Court Toronto, Ontario M5L 1E7	Kidd Creek Mine, Kidd Twp./O,U	1966	11 900	Flotation	Zinc conc copper conc lead conc tin conc	Started up new 59 000 tonnes copper smelter and refinery in 1981 with capacity operations expected by mid-1982. Zinc plant expansion from 109 000 tonnes to 125 000 tonnes to be completed in 1982. Excess zinc concentrates from Timmins and Arctic Bay sold in U.S., Japan or Europe. Excess copper concentrates custom smelted and refined at Noranda and Montreal. Lead concentrate shipped to U.S. Tin concentrate sold to Mexico and U.K. Substantial silver and cadmium recovered from concentrates.
	Timmins	1966	12 300	Flotation	Zinc conc copper conc lead conc tin conc	
Madawaska Mines Limited Bancroft, Ontario K0L 1C0	Bancroft/U	1976	1 500		U_3O_8	
Marmoraton Mining Company, Ltd. Marmora, Ontario K0K 2M0	Marmora/O	1955	426 400 tonnes/year	Magnetic separation	Iron ore pellets	Operations ceased March 31, 1978.
Mattabi Mines Limited P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Ignace, Sturgeon Lake/O,U	1972	1 000	Flotation	Zinc conc, lead conc, copper conc	Zinc conc shipped to domestic market, U.S. and Europe; however, all zinc conc from Lyon Lake Division is sold to Canadian Electrolytic Zinc; lead conc containing silver shipped to Cominco Ltd., B.C.; copper conc containing silver and gold shipped to Noranda, Que. Mining method at Ignace to be phased from open pit to underground in 1981.
	Lyon Lake/U,O	..	..	Same	Zinc conc, lead conc, copper conc	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
National Steel Corporation of Canada, Limited P.O. Box 310 Capreol, Ontario POM 1HO	Moose Mountain Mine Hutton Twp., Capreol/O	1959	691 000 tonnes/ year	Magnetic separation, flotation	Iron ore pellets	Mine and pelletizing plant closed May 1979; shipping dock at Depot Harbour, Parry Sound closed following shipment of 1979 production.
Noranda Mines Limited P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Geco Mine, Gertrude & Gemmell Twp., Manitouwadge/U	1957	5 000	Differential flotation	Copper conc, zinc conc, lead conc	Copper conc containing silver and gold shipped to Noranda, Quebec; zinc conc shipped to Valleyfield, Quebec; lead conc containing silver shipped to Trail, B.C.
	Langmuir Property, Timmins area/U	1973	635	Flotation	Nickel conc	Operations discontinued March 1978.
Pamour Porcupine Mines, Limited P.O. Box 2010 Timmins, Ontario P4N 7X7	Pamour No. 1 Mine/U,O Pamour No. 2 Mine/U Whitney Township	1936	3 000	Flotation cyanidation	Gold bullion	Pamour 1 receives ore from outside properties: Falconbridge Hoyle, Pamour 2, Pamour 3, Timmins property, Joburke, Matachewan, Canadian Arrow. Pamour 2 was re-opened May 1980. Ore being shipped to Pamour 1.
	Pamour No. 3 Mine Deloro Twp./U	..	..	..	Gold ore	No. 2 shaft on Delnite property being re-activated for production at which time No. 1 shaft (Aunor property) will be maintained on a standby basis.
	Schumacher Mine Tisdale Twp./U	1912 Gold 1962 Copper	3 000 Combined circuit	Jig flotation cyanidation, gold flotation, copper	Gold bullion copper conc	Schumacher concentrator receives ore from Ross Mine, Timmins property and tolled ore.
	Romfield property Deloro Twp./O	..	..	..	Gold ore	Surface mining at Romfield property commenced in 1978.
	Hoyle, Hoyle Twp./U (leased from Falconbridge Nickel)	..	..	..	Gold	

	Matachewan, Powell Twp.	..	..	..	Gold	Shipments from Matachewan Mine started mid-1979.
	Ross Mine Hislop Twp./U	..	..	..	Gold ore	Ross Mine shaft was deepened in 1978.
	Timmins Underground Project Tisdale Twp./U	..	..	..	Gold ore	Mine shaft on former Hollinger being prepared for production in 1982.
Pickands Mather & Co., Managing Agent The Griffith Mine Red Lake, Ontario P0V 2M0	The Griffith Mine, Bruce Lake, near Red Lake/O	1968	1 524 000 tonnes of pellets/ year	Magnetic concentration, flotation	Iron ore pellets	Iron ore pellets are shipped to the steel plant of Stelco Inc.
Rio Algom Limited 120 Adelaide Street West Toronto, Ontario M5H 1W5	Quirke Mine, Elliot Lake/U	1956	6 350	Acid leaching	Ammonium diuranate (approx. 80% U_3O_8 equivalent)	Milling capacity increased in 1978.
	Panel Mine, Elliot Lake	..	3 000	Acid leaching	Magnesium diuranate	Reactivated in 1979.
	Stanleigh Mine, Elliot Lake	..	5 000	Acid leaching	Magnesium diuranate	Scheduled to go into production in 1983.
Selco Inc. 55 University Avenue Toronto, Ontario M5J 2H7	South Bay Mine, Uchi Lake area/U	1971	450	Flotation	Copper conc, zinc conc	
Steep Rock Iron Mines Limited Atikokan, Ontario P0T 1C0	Freeborn Twp., Steep Rock Lake/O	1958 conc plant	640 000 tonnes of product/year	Gravity concentration by jigs and spirals	Iron ore conc	Open pit shut down February 1, 1979.
		1967 pellet plant	1 473 000 tonnes pellets/ year	Pelletizing	Iron ore pellets	Pelletizing operation ceased August 31, 1979. All pellet production was shipped to The Algoma Steel Corporation, Limited.
Teck Corporation (Silverfields Division) 4900 - Box 49 Toronto Dominion Centre Toronto, Ontario M5K 1E8	Coleman Twp., Cobalt/U	1965	200	Gravity, flotation	Silver conc	Silver conc is shipped to various domestic and overseas smelters.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
Umex Inc. P.O. Box 128 Pickle Lake, Ontario POV 3AO	Thierry Mine Pickle Lake Kenora District/U	1976	4 000	Flotation	Copper conc	Mill feed from underground. Conc shipped to Noranda. Ore from K1-1 pit in 1981. New nickel circuit installed. Nickel conc to be shipped to Falconbridge Nickel Mines Limited.
Willroy Mines Limited (Macassa Division) Kirkland Lake, Ontario P2N 3J7	Macassa Mine, Kirkland Lake/U	1933	450	Cyanidation	Gold bullion	Gold bullion bars shipped to the Royal Canadian Mint, Ottawa, for refining.
MANITOBA						
Falconbridge Nickel Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Manibridge Mine, Wabowden/U	1971	900	Flotation	Copper conc, nickel conc	Mine closed April 30, 1977 due to exhaustion of ore.
Hudson Bay Mining and Smelting Co., Limited P.O. Box 1500 Flin Flon, Manitoba R8A 1N9	Flin Flon Mine, Flin Flon-Snow Lake area/U	1931	2 000 000 tonnes/yr	Flotation	Copper conc, zinc conc, lead conc	Since May 1979 ore from company mines in the Flin Flon area is being treated at the Flin Flon mill and ore from the Snow Lake area (Stall, Anderson, Ghost, Chisel, and Osborne Mines) is being treated at the Snow Lake Mill situated at Stall Lake Mine site which commenced operations May 15, 1979. Conc from the Snow Lake Mill are being shipped to Flin Flon for smelting and refining. The copper conc are reduced to copper anodes in the company's smelter and refined at Canadian Copper Refiners Limited, Montreal East; zinc conc are smelted and refined in the Flin Flon plant;

						lead conc are shipped to Cominco Ltd., Trail. Other elements extracted in the refining processes are gold, silver, cadmium, selenium and tellurium.
	Anderson Lake Mine/U	..	..	Same	Copper ore	Anderson Lake Mine was down for shaft deepening and development from February 1978 to May 1979 when production was resumed.
	Chisel Lake Mine/U	..	..	Same	Copper-zinc-lead ore	
	Ghost Lake Mine/U	..	..	Same	Zinc ore	
	Osborne Lake Mine/U	..	..	Same	Copper-zinc ore	
	Rod Mine	..	..	Same	Copper-zinc ore	
	Spruce Point Mine	..	..	Same	Copper-zinc ore	
	Stall Lake Mine/U Snow Lake Mill	1979	3 450	Same	Copper conc, zinc conc	
	Trout Lake Mine	..	..	Same	Copper-zinc ore	
	White Lake Mine/U	..	..	Same	Copper-zinc ore	White Lake Mine resumed operations in 1978 after being out of production for shaft-deepening and redevelopment in 1976-77.
	Westarm Mine/U	..	..	Same	Copper-zinc ore	Production began in January 1978.
	Centennial Mine/U	..	..	Same	Copper-zinc ore	Full production started June 30, 1977.
Inco Metals Company (Manitoba Division) Thompson, Manitoba R8N 1P3	Thompson Mill, Thompson	1961	14 000	Flotation	Nickel conc, copper conc, pentlandite conc	Thompson Mill treats ore from all Thompson area mines (Thompson, Pipe Mines).
	Thompson Mine, Thompson/U	..	..	Same	Nickel-copper ore	
	Birchtree Mine, Thompson/U	..	..	Same	Nickel-copper ore	Placed on standby 1977.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
MANITOBA (cont'd)						
Inco Metals Company (cont'd)	Pipe Mine, near Thompson/O	..	..	Same	Nickel-copper ore	Underground portions on standby 1978; open-pit production continues.
Sherritt Gordon Mines Limited P.O. Box 28 Commerce Court West Toronto, Ontario M5L 1B1	Fox Mine, near Lynn Lake/U	1970	2 700	Flotation	Copper conc, zinc conc	Copper conc and zinc conc treated at Hudson Bay Mining and Smelting Co., Limited.
	Ruttan Mine, Ruttan Lake/O,U	1973	9 070	Flotation	Copper conc, zinc conc	Underground production started 1979. Copper conc sold to Noranda Sales (1961) Ltd. and Hudson Bay Mining and Smelting Co., Limited; zinc conc sold to Hudson Bay Mining and Smelting Co., Limited and St. Joe Zinc Company in USA.
Tantalum Mining Corporation of Canada Limited Bernic Lake, Manitoba ROE OGO	Bernic Lake/U	1969	900	Gravity, flotation	Tantalum conc and cesium ore	Tantalum conc shipped to USA and European markets.
SASKATCHEWAN						
Cenex Limited Suite 1105 347 Bay Street Toronto, Ontario M5H 2R7	Cinch Mine, Uranium City/U	..	..	..	Uranium ore	Mine started producing at the beginning of March 1979; ceased latter part of 1979. Uranium ore (1 814 tonnes per week) processed by Eldorado Nuclear Limited in their Beaverlodge mill, under terms of a custom-milling agreement.
Eldorado Nuclear Limited Suite 400 - 255 Albert Street Ottawa, Ontario K1P 6A9	Eldorado, Uranium City area/U	1953	1 500	Flotation, base and acid leaching	Sodium diuranate ($Na_2U_2O_7$)	Uranium conc (sodium diuranate) are shipped to the company's refinery at Port Hope, Ont. for conversion to uranium dioxide and uranium hexafluoride sold under contract agreements.

Gulf Minerals Canada Limited 1400 - 110 Yonge Street Toronto, Ontario M5C 1T4	Rabbit Lake Mine, Wollaston Lake/O	1975	1 800	Acid leaching	U_3O_8	The Rabbit Lake operation is a joint venture between Gulf Minerals Canada Limited (51%) and Uranerz Canada Limited, a West German company.
Hudson Bay Mining and Smelting Co., Limited P.O. Box 1500 Flin Flon, Manitoba R8A 1N9	Flin Flon Mine/U Flin Flon-Snow Lake area Anderson Lake Mine/U Centennial Mine/U Chisel Lake Mine/U Ghost Lake Mine/U Osborne Lake Mine/U Rod Mine/U Spruce Point Mine/U Stall Lake Mine/U Trout Lake Mine/U West Arm Mine/U White Lake Mine/U	1931	2 000 000 tonnes/yr	Flotation	Copper conc, zinc conc, lead conc	Ore from mines in the Snow Lake area is being treated in the Snow Lake concentrator and ore from company mines in the Flin Flon area is being treated at the Flin Flon Mill. The copper conc are reduced to copper anodes in the company's smelter and refined at Canadian Copper Refiners Limited, Montreal East; zinc conc are smelted and refined in the Flin Flon plant; lead conc are shipped to Cominco Ltd., Trail. Other elements extracted in the refining processes are gold, silver, cadmium, selenium and tellurium.
BRITISH COLUMBIA						
Afton Operating Corporation P.O. Box 937 Kamloops, British Columbia V2C 5N4	Kamloops/O	1977	7 720	Gravity flotation	Copper conc	Copper conc containing gold and silver smelted at mine site to produce blister copper; sold to British Insulated Callendar Cables Ltd. and The Delta Metal Co. of United Kingdom.
Bethlehem Copper Corporation 2100 - 1055 West Hastings Street Vancouver, British Columbia V6E 2H8	Highland Valley, Ashcroft/O	1962	18 100	Flotation	Copper conc, molybdenum conc	Copper conc containing some silver and gold is shipped to Japan; molybdenum conc shipped to Germany. Construction of the new molybdenum plant completed June 1978.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
BRITISH COLUMBIA (cont'd)						
Brenda Mines Ltd. P.O. Box 420 Peachland, British Columbia V0H 1X0	Brenda Mine, Peachland/O	1970	27 000	Flotation	Copper conc, molybdenum conc	Conc marketed by Noranda Sales (1961) Ltd. of Canada. Copper conc is sold in Japan and molybdenum conc is shipped to Europe for roasting and subsequent sales throughout Europe.
Canada Wide Mines Ltd. (Granduc Division) P.O. Box 190 Stewart, British Columbia V0T 1W0	Granduc Mine, Cassiar District/U	1980	71 000 tonnes/yr	Flotation	Copper conc with silver and gold by-products	Acquired from Newmont Mines Limited in 1979.
Cominco Ltd. Trail, British Columbia V1R 4L8	H.B. Mine, Salmo area/U	1955 1973 reopened	1 100	Flotation	Zinc conc, lead conc	Mine closed August 17, 1978.
	Sullivan Mine Kimberley/U	1923	9 070	Flotation	Zinc conc, lead conc	Conc shipped to the company's smelter at Trail; the conc contain some silver, antimony, cadmium, bismuth, tin, indium and copper.
Craigmont Mines Limited 700 Burrard Building 1030 West Georgia Street Vancouver, British Columbia V6E 3A8	Merritt/U	1961	4 989	Flotation	Copper conc, magnetite conc	Bulk of copper conc shipped to Japan. Magnetite conc sold as reagent to western Canadian coal washing plants.
Dankoe Mines Ltd. 2002 - 1177 West Hastings Street Vancouver, British Columbia V6E 2K5	Utica Mine, Keremeos/U	1967 1976 reopened	408	Flotation	Silver-gold-lead-zinc conc	
Dickenson Mines Limited (Silvana Mines Division) 1402 - 390 Bay Street Toronto, Ontraio M5H 2Y2	New Denver/U	1970	100	Flotation	Lead-silver, zinc-silver conc	Acquired Carnegie Mining Corporation Limited mill September 1977. Lead conc shipped to Cominco, Trail, B.C.; zinc conc shipped to Idaho.
Erickson Gold Mining Corp. 203 - 1209 E - 4th Street Vancouver, British Columbia V7J 1G8	Cassiar	..	..	..	Silver-gold ore	

Gibraltar Mines Limited 700 - 1030 West Georgia Street Vancouver, British Columbia V6E 2A3	McLeese Lake, Cariboo District/O	1972	36 300	Flotation	Copper conc, molybdenum conc	Bulk of conc shipped to Japan. Production in 1979 was primarily from Pollyanna pit. Pre-development of Gibraltar East stage II pit included stripping 8 million yards of overburden and construction of new primary crusher and conveying system.
Lornex Mining Corporation Ltd. P.O. Box 1035 1650 - 609 Granville Street Vancouver, British Columbia V7Y 1G5	Highland Valley/O	1972	80 000	Flotation	Copper conc, molybdenum conc	Half of copper conc shipped on a long term contract to Japan and the other half shipped to short term contracts and spot sales.
Mosquito Creek Gold Mining Company Limited, The P.O. Box 10 Well, British Columbia VOK 2RO	Wells	1980	100	Cyanidation	Gold and silver	Started mining November 1979.
Newmont Mines Limited (Similkameen Division) 1400 - 750 West Pender Street Vancouver, British Columbia V6C 1K3	Princeton/O	1972	19 958	Flotation	Copper conc	Copper conc containing gold and silver shipped to Japan.
Noranda Mines Limited (Babine Division) P.O. Box 1000 Granisle, British Columbia V6C 1K3	Bell Copper Mine/O Granisle Copper Mine/O Babine Lake	1972 1965	17 000 13 200	Flotation Same	Copper conc	Conc contain minor gold and silver. Bell Mine conc shipped to Noranda, marketed through Noranda Sales (1961) Ltd. of Canada. Granisle Mine conc shipped to Noranda and Germany.
Noranda Mines Limited (Boss Mountain Division) Hendrix Lake, British Columbia VOK 1RO	Hendrix Lake/U,O	1965 1974 reopened	2 000	Flotation	Molybdenum conc	Molybdenum conc shipped to Europe.
Nor-Quest Resources Ltd. 2231-G McGarrigle Road Nanaimo, British Columbia V9S 4M5	Goat Ridge Mine Stewart	1979	100	Flotation	Silver conc	Seasonal operation (mine 100 days, mill 200 days). Conc sold to Cominco Ltd.
Northair Mines Ltd. 1450 - 625 Howe Street Vancouver, British Columbia V6C 2T6	Squamish Brandywine area/U	1976	350	Flotation, jigs	Gold-silver bullion, lead conc, zinc conc	The bullion is sold to the Royal Canadian Mint, Ottawa; lead conc and zinc conc to Cominco Ltd., Trail, B.C.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
BRITISH COLUMBIA (cont'd)						
Placer Development Limited (Endako Mines Division) 700 Burrard Building 1030 West Georgia Street Vancouver, British Columbia V6E 3A8	Endako/O	1965	31 000	Flotation	Molybdenite conc molybdic oxide	Most of the molybdenite conc is roasted to convert to molybdic oxide; both products sold on domestic and foreign markets.
Teck Corporation 1199 West Hastings Street Vancouver, British Columbia V6E 2K5	Beaverdell Mine/U	1950	100	Flotation	Lead conc, zinc conc	Conc shipped to Cominco Ltd., Trail, British Columbia; gold, silver, lead, zinc, and minor cadmium and copper are contained in the conc. Main product is silver.
Utah Mines Ltd. P.O. Box 370 Port Hardy, British Columbia VON 2PO	Island Copper Mine, Port Hardy area, Vancouver Island/O	1971	37 200	Flotation	Copper conc, molybdenum conc	For copper conc, existing smelting contracts with Mitsui Mining & Smelting Co. Ltd., Mitsubishi Shoji Kaisha and the Dowa Mining Co., Ltd. call for deliveries of between 84% and 100% of total output of conc. Molybdenum conc shipped to USA and Germany.
Wesfrob Mining Division (Falconbridge Nickel Mines Limited) 603 - 1112 West Pender Street Vancouver, British Columbia V6E 2S1	Tasu Queen Charlotte Islands/U	1967	650 000 tonnes of conc per year	Magnetic separation, flotation	Magnetite conc, copper conc	Magnetite conc shipped to Japan and USA; copper conc shipped to Japan.
Westmin Resources Limited Box 49066 904 Four Bentall Centre Vancouver, British Columbia V7X 1C4	Myra Falls, Strathcona Provincial Park, Vancouver Island/U	1967	900	Flotation	Zinc conc, copper conc, lead conc	Zinc and lead conc shipped to Trail, B.C. and USA; copper conc to Japan.
YUKON TERRITORY						
Cyprus Anvil Mining Corporation P.O. Box 1000 Faro, Yukon Territory YOB 1KO	Rose Creek, Faro/O	1969	9 070	Flotation	Lead conc, zinc conc	Lead and zinc conc shipped to Japan.

Hudson Bay Mining and Smelting Co., Limited, (Whitehorse Copper Mines Division) P.O. Box 28 Toronto Dominion Centre Toronto, Ontario M5K 1B8	Little Chief and Middle Chief Mines, Whitehorse/U	1967 1972 reopened	2 270	Flotation	Copper, silver, gold	Conc shipped to Vancouver via White Pass and Yukon Route, then by rail to Flin Flon, Manitoba.
United Keno Hill Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Elsa/O	1947	450	Flotation, cyanidation	Silver-lead conc, cyanide precipitate	Silver-lead conc shipped to ASARCO Incorporated, East Helena, Montana. Cyanide precipitate reduced to doré at Elsa.
NORTHWEST TERRITORIES						
Canada Tungsten Mining Corporation Limited 1600 - 1066 West Hastings Street Vancouver, British Columbia V6E 3X1	Tungsten, Northwest Territories/U	1962 1967 reopened	1 000	Gravity, flotation	Scheelite (tungsten) conc, copper conc	Increased mill capacity 1979. Scheelite conc shipped mainly to USA, Europe and Japan.
Cominco Ltd. Yellowknife, Northwest Territories X0E 1H0	Con and Rycon Mines, Yellowknife/U	1938	590	Cyanidation	Gold bullion	Ore from the Con mine is treated in the Con mill; gold bullion bars produced are shipped to the Royal Canadian Mint, Ottawa, for refining.
Echo Bay Mines Ltd. 500 - 10909 Jasper Avenue Pacific Plaza Edmonton, Alberta T5J 3L9	Port Radium	1964	136	Gravity, flotation	Silver conc	Phasing out.
	Contwoyto Lake		1 000	Cyanidation	Gold bullion	Milling to start mid-1982.
Giant Yellowknife Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Giant Mine, Yellowknife/U,O	1948	1 100	Flotation, roasting, cyanidation	Gold bullion	Gold bullion bars shipped to the Royal Canadian Mint, Ottawa, for refining.
	Lolor Mine/U	..	..	Same	Gold ore	Gold ore from both Lolor and Supercrest is mined through extensions of the Giant underground workings and treated at the Giant mill.
	Supercrest Mine/U	..	..	Same	Gold ore	
Hope Bay Mines Ltd. 501 - 409 Granville Street Vancouver, British Columbia V6T 1T5	Hope Bay area, Melville Sound/U	1974	45	..	Silver conc	Ceased 1979.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
NORTHWEST TERRITORIES (cont'd)						
Nanisivik Mines Ltd. c/o Strathcona Mineral Services Limited 401 - 44 Victoria Street Toronto, Ontario M5C 1Y2	Nanisivik, Baffin Island, Northwest Territories/U	1976	2 000	Flotation	Lead conc, zinc conc	Lead conc shipped to Europe and zinc conc shipped to Europe and Texasgulf Metals Company.
Pine Point Mines Limited Pine Point, Northwest Territories X0E 0W0	Pine Point/O	1965	10 000	Flotation	Zinc conc, lead conc	Acid leaching section installed to control MgO in some of the zinc conc. Conc shipped to Trail smelter, USA, Japan, Europe and India.
Terra Mining and Exploration Limited 202, 7608 - 103rd Street Edmonton, Alberta T6E 4Z8	Camsell River, Great Bear Lake/U	1969	200	Gravity, flotation	High-grade silver, jig conc, bulk silver-copper float conc	Jig conc shipped to the smelters of ASARCO Incorporated in East Helena, Montana.
	INDUSTRIAL MINERAL MINES AND PROCESSING PLANTS					
NEWFOUNDLAND						
Advocate Mines Limited P.O. Box 174 Royal Trust Tower Toronto-Dominion Centre Toronto, Ontario M5K 1H6	Baie Verte, White Bay District/O	1963	225	Dry milling	Chrysotile asbestos	The fibre is extracted from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.
Atlantic Gypsum Limited P.O. Box 61 Corner Brook, Newfoundland A2H 6C3	Corner Brook	1952	200	Crushing, calcining	Gypsum, plaster and wallboard	Gypsum from Flintkote Holdings Limited at Flat Bay is used in the manufacture of wallboard and plaster; subsidiary of Lundrigans Limited.
Dunville Mining Company c/o ERCO Industries Limited Long Harbour, Newfoundland A0B 2J0	Villa Marie, Placentia Bay/O	1968	1 360	Crushing and wet screening	Silica	Shipped to ERCO Industries Limited, Long Harbour, Placentia Bay for use in manufacturing elemental phosphorus.

Flintkote Holdings Limited R.R. #1 P.O. Box 38 St. Georges, Newfoundland A0N 1Z0	Flat Bay/O	1962	4 535	Crushing	Gypsum	Crushed gypsum is shipped to domestic and USA markets.
Newfoundland Minerals Limited P.O. Box 98 Manuels, Newfoundland A0A 2Y0	Long Pond, Manuels/O	1956	..	Crushing	Pyrophyllite	Shipped to American Olean Tile Company, Inc., Lansdale, Pa. for use in manufacture of ceramic tile.
North Star Cement Limited P.O. Box 160 Corner Brook, Newfoundland A2H 6C7	Corner Brook/O	1952	159 000 tonnes/year	Dry process	Cement	
NOVA SCOTIA						
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Brookfield Plant No. 6/O	1965 1978 new kiln	454 000 tonnes/year	Dry process	Cement	
Canadian Salt Company, Limited, The 606 Cathcart Street Montreal, Quebec H3B 1L6	Pugwash/U	1959	4 080	Crushing, screening, quadruple-effect vacuum pan evaporation	Rock salt	
	Pugwash	1963	326		Salt	Brine made from mined rock salt used to produce fine evaporated salt.
Domtar Inc. Sifto Salt Division 1136 Matheson Boulevard Mississauga, Ontario L4W 2V4	Amherst (Nappan)/S	1947	8 300 tonnes/ month	Triple- and quadruple-effect vacuum pan evaporation	Salt	Fine salt production.
Domtar Inc. Domtar Construction Materials Division 2001 University Avenue Montreal, Quebec H3C 3K4	McKay Settlement/O	1890	110	Crushing, calcining	Gypsum, plaster	Gypsum is trucked to the company's plant at Windsor, a distance of 19 km, for calcining.
Dresser Minerals Division of Dresser Industries, Inc. Walton, Nova Scotia B0N 2R0	Walton/U	1942	110 tonnes/hr	Crushing, screening, washing, tabling, jigging, grinding	Barite	Mining and crude shipment ceased in 1978. Reclamation work and disposal of assets continued through 1980.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
NOVA SCOTIA (cont'd)						
Fundy Gypsum Company Limited P.O. Box 400 Windsor, Nova Scotia B0N 2T0	Miller's Creek/O	1957	..	Crushing	Gypsum	Crude gypsum is shipped to USA.
	Wentworth/O	1933		Crushing, heavy-media separation	Gypsum and anhydrite	Gypsum and anhydrite are shipped to USA.
Georgia-Pacific Corporation (Gypsum Division) P.O. Box 400 Port Hawkesbury, Nova Scotia B0E 2V0	River Denys/O	1962	4 000 8-hr shift	Crushing	Gypsum	Crude gypsum is shipped to USA.
Gulf Canada Limited P.O. Box 460 Station "A" Toronto, Ontario M5W 1E5	Point Tupper	1971	30	Oil refining	Sulphur	Shut down 1980.
Imperial Oil Limited Logistics Department 111 St. Clair Avenue West Toronto, Ontario M5W 1K3	Dartmouth	1966	76	Oil refining	Sulphur	
Little Narrows Gypsum Company Limited 790 Bay Street Toronto, Ontario M5G 1N8	Little Narrows/O	1934	2 700 8-hr shift	Crushing	Gypsum	Crude gypsum is shipped to domestic markets in Quebec and Ontario, and is also exported to USA.
National Gypsum (Canada) Ltd. P.O. Box 637 Dartmouth, Nova Scotia B2Y 3Y9	Milford Station/O	1955	9 070 8-hr shift	Crushing	Gypsum	Crude gypsum is shipped to customers in Canada and USA.
Scotia Limestone Limited P.O. Box 457 Sydney, Nova Scotia B1P 6H4	Irish Cove/O	1965	1 996	Crushing	Limestone	Flux for Sydney Steel Corporation.
	Frenchvale/O	1965	1 996	Crushing	Dolomite	Flux for Sydney Steel Corporation.
	Kelly Cove/O	1982		Crushing	Dolomite	Flux trucked to Sydney Steel Corporation.

NEW BRUNSWICK						
Avon Aggregates Ltd. P.O. Box 460 Minto, New Brunswick E0E 1J0	Minto/O	1972	54 000 tonnes/yr	Expanding	Lightweight aggregate (Expanded shale)	Product marketed in the Maritimes, northern New England and eastern Quebec.
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Havelock, Plant No. 2/O	1951	276 000 tonnes/yr	Dry process	Cement	
Canadian Gypsum Company, Limited 790 Bay Street Toronto, Ontario M5G 1N8	Hillsborough/O	1931	136	Crushing, calcining	Wallboard	Closed December 1980.
Chaleur Silica Ltd. P.O. Box 4, Site 4 Petit Rocher North, New Brunswick E0B 2E0	Petit Rocher	1976	150 000 tonnes/yr	Crushing	Silica	
Irving Oil Limited P.O. Box 1421 Saint John, New Brunswick E2L 4K1	Saint John	1960 1976 Expansion of refining	181	Oil refining	Sulphur	
QUEBEC						
Armand Sicotte & Sons Limited 1950 Boul. Sir Wilfred Laurier St-Hubert, Quebec J4T 2E7	Ste-Clotilde Chateauguay County/O	1956	1 000	Crushing	Silica	Product sold to a chemical company, cement plants and ferromanganese plants.
Asbestos Corporation Limited P.O. Box 9 Thetford Mines, Quebec G6G 5S1	British Canadian Mine, Black Lake/O Mill No. 1	1882	7 300	Dry milling	Chrysotile asbestos	All milling plants of the company extract fibre from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.
	Mill No. 2	1954	6 530	Dry milling	Chrysotile asbestos	
	King-Beaver Mine, Thetford Mines/O	..	..	Dry milling	Chrysotile asbestos	Ore is crushed and dried at King Beaver. Underground ore is treated at British Canadian Mills. Open pit ore is treated at Normandie Mill.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Asbestos Corporation Limited (cont'd)	Asbestos Hill, Ungava Bay Quebec North/O	1955	4 430 conc	Dry milling	Chrysotile asbestos	Ore is crushed and dried and then transported by boat to a mill at Nordenham, West Germany where it is treated.
Bakertalc Inc. 400 - 621 St-Antoine Street West Montreal, Quebec H3C 1A2	Van Reet Mine, South Bolton Potton Twp./U	1938 current mill 1970	130	Grinding, flotation, micronizing	Talc, soapstone	Ore is milled at Highwater, 24 km from the mine; classified ground talc is shipped to consumers across Canada and the USA. Higher grades of talc used in papers, paint and plastics; soapstone sold in block for sculpturing.
Baskatong Quartz Inc. P.O. Box 337 Station N.D.G. Montreal, Quebec H4A 3P6	Grand Remous Gatineau County/O	1962	300	Crushing, sizing	Quartz	Mine closed July 1977.
	Petit lac Malbaie Chalevoix County/O	1975	1 360	Crushing, sizing	Quartz	Product sold for manufacture of silicon metal.
Bell Asbestos Mines, Ltd. P.O. Box 99 Thetford Mines, Quebec G6G 5S4	Thetford Mines/U,O	1878	3 000	Dry milling	Chrysotile asbestos	Fibre is extracted from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.
B.S.Q. Talc Inc. St.-Pierre-de-Broughton, Quebec G0N 1T0	St.-Pierre-de-Broughton/O	1934	200	Grinding, sizing	Talc, soapstone	Separate quarries for talc and soapstone; talc is classified and shipped to consumers; soapstone is sawn into metal workers' crayons and blocks for sculpturing and refractory use.
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	St. Constant Plant No. 7/O	1966 1975 new kiln	833 000 tonnes/yr	Dry process	Cement	

Canadian Gypsum Company, Limited 790 Bay Street Toronto, Ontario M5G 1N8	Montreal	1954	400	Grinding, calcining	Wallboard and plaster	Crude gypsum for the plant is shipped from Nova Scotia.
Carey Canada Inc. P.O. Box 190 East Broughton Station, Quebec G0N 1H0	East Broughton Twp./O	1958	8 800	Dry milling	Chrysotile asbestos	The fibre is extracted from ore by crushing, screening, and aspiration; asbestos fibre is graded as to length and quality.
Ciment Quebec Inc. St-Basile-de-Portneuf, Quebec G0A 3G0	St-Basile-de-Portneuf/O	1951	1 080	Wet process	Cement	
Domtar Inc. Domtar Construction Materials Division 2001 University Avenue Montreal, Quebec H3C 3K4	Montreal East	1925	360	Grinding, calcining	Wallboard and plaster	Crude gypsum for the plant is obtained from Nova Scotia and Newfoundland.
Dresser Canada, Inc. (Canadian Refractories Division) 4 Place Ville Marie Montreal, Quebec H3B 2E7	Kilmar/U	1918	1 180	Crushing, heavy-media beneficiation, sintering	Dolomitic magnesite clinker	Clinker of blended ores is shipped to the company's plant at Marelan for manufacture into refractory products. In 1918 original mill started; 1977 new crushing plant completed; 1978 new larger capacity rotary kiln.
Ensio Industries Inc. 1079 Chambly Street Room 206 Longueuil, Quebec J4H 3M7	Varennes	1970	326	Drying, crushing, sizing, blending	Chromite foundry sand, blast grit products (sand blasting)	
F. Hyde & Company Limited 2587 Côte de Liesse Montreal, Quebec H4N 2M8	Montreal	1938	40	Exfoliating	Lightweight aggregate (vermiculite)	
Independent Cement Inc. 966 Des Prairies Road P.O. Box 480 Joliette, Quebec J6E 6H7	Joliette/O	1966	1 082 000 tonnes/yr	Dry process	Cement	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Indusmin Limited (Quebec Silica Division) 365 Bloor Street East Toronto, Ontario M4W 1H7	St-Canut/O	1954	1 800	Crushing, grinding, classifying	Silica	Silica is shipped from St-Donat-de-Montcalm to St-Canut for processing into various products.
	St-Donat-de-Montcalm/O	1955	1 080	Crushing, grinding, classifying, washing	Silica	
Industrial Fillers Limited 2020 University Street Montreal, Quebec H3A 2A5	St-Armand Missisquoi Co.	1927	270	Grinding, sizing	Marble flour, whiting	Grinding and sizing various materials; custom milling.
Industrial Granules Ltd. 2545 Delorimier Avenue Longueuil, Quebec J4K 3P8	Longueuil	1961	360	Drying, crushing, sizing, blending	Roofing granules, blast grit products (sand blasting)	Granules prepared from slag and quarried stone (hornfels).
Johns-Manville Canada Inc. P.O. Box 1500 Asbestos, Quebec J1T 3N2	Jeffery Mine, Asbestos/O	1882	631 250 tonnes/yr	Dry milling	Chrysotile asbestos	The fibre is extracted from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.
	Bolduc Mine, Carpentier Twp./O	1974	4 500 tonnes/yr	Dry milling	Chrysotile asbestos	Closed December 1977.
Lake Asbestos of Quebec, Ltd. (Black Lake Division) Black Lake, Quebec G0N 1A0	Black Lake/O	1958	14 200	Dry milling	Chrysotile asbestos	The fibre is extracted from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.
Lake Asbestos of Quebec, Ltd. (National Mines Division) Black Lake, Quebec G0N 1A0	Thetford Mines/O	1958	6 900	Dry milling	Chrysotile asbestos	
Marietta Resources International Ltd. (Société Mineralurgique Laviolette, Inc.) 1475 Graham Bell Boucherville, Quebec J4B 6A1	Mine - Lac Letondal/O Plant - Boucherville	1977	160	Dry grinding, pneumatic separation, screening	Suzorite mica conc	Powder or dry ground mica and surface treated grade for plastic.

Masonite Canada Inc. (Insulation Board Division) Gatineau, Quebec J8P 6K3	Gatineau	1972	36	Expanding	Lightweight aggregate (perlite)	Aggregate used in the manufacture of company products.
Miron Inc. 2201 Cremazie Blvd. East Montreal, Quebec H1Z 2C1	Montreal/O	1960	1 000 000 tonnes/yr	Dry process	Cement	
Montreal Silica Mines Ltd. 500 Place Crémazie Suite 317 Montreal, Quebec H2P 2S9	Dumas Twp., Ormstown/O	1977	600	Washing, drying, screening	Silica sand	Silica sand, to foundries; fibre-glass, window-glass, sand blasting and also to serve as fill.
NL Chem Canada Inc. Box 5800 Varennes, Quebec JOL 2P0	Varennes	1957	100	Sulphate treatment of titania	Titanium dioxide pigments	Ilmenite is mined at Lac Tio, Saguenay County; smelter treatment at Sorel yields titania slag that is shipped to Varennes where chemical manufacturing methods produce titanium dioxide pigments.
Perlite Industries Inc. 500 Canal Bank Ville Saint-Pierre, Quebec H8R 1H4	Ville Saint-Pierre	1949	32	Expanding	Lightweight aggregate (perlite)	Aggregate marketed for industrial and agricultural use.
St. Lawrence Cement Inc. P.O. Box 1156 Quebec, Quebec G1K 7C9	Beauport	1954	643 500 tpy	Wet process	Cement	
Sulconam Inc. 11450 Cherrier Street Montreal East, Quebec H1B 1A6	Montreal East	1958	305	Refining	Sulphur	Formerly Laurentide Chemicals & Sulphur Ltd. Feedstock obtained from nearby petroleum refineries, Imperial Oil Limited. Sulphur produced by modified Claus process. Plant has pollution control facility.
Tioxide Canada Inc. P.O. Box 580 Sorel, Quebec J3P 5P8	Tracy	1962	33 100 tonnes/yr	Sulphate treatment of titania slag	Titanium dioxide pigment	Chemical plant manufactures titanium dioxide pigments from titania slag produced at Sorel by QIT-Fer et Titane Inc.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
QUEBEC (cont'd)						
Union Carbide Canada Limited 123 Eglinton Avenue East Toronto, Ontario M4P 1J3	Melocheville/O	1945	1 360 per 8 hr day when operating	Crushing, sizing	Silica	Sized sandstone shipped to company plant manufacturing ferrosilicon. Plant has not been in production since 1977.
V.I.L. Vermiculite Inc. 1775 - 52nd Avenue Lachine, Quebec H8T 2Y1	Lachine	1960	..	Exfoliating	Insulation and lightweight aggregate (vermiculite)	
Westroc Industries Limited 2650 Lakeshore Highway Mississauga, Ontario L5J 1K4	Ste-Catherine d'Alexandrie	1973	600	Crushing, calcining	Plaster, wallboard	Crude gypsum is obtained from Nova Scotia.
ONTARIO						
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Woodstock, Plant No. 4/O	1956	469 000 tonnes/yr	Wet process	Cement	
	Bath Plant No. 9/O	1973	1 000 000 tonnes/yr	Dry process	Cement	
Canada Talc Industries Limited Madoc, Ontario K0K 2K0	Madoc/U	1916	110	Crushing, grinding, sizing	Talc, dolomite	High-quality talc suitable as a filler material in paint, plastics, fertilizers, and building products. Dolomite chips for the terrazzo market.
Canadian Gypsum Company, Limited 790 Bay Street Toronto, Ontario M5G 1N8	Hagersville/U	1931	1 200	Crushing, calcining	Gypsum, plaster, wallboard	Gypsum is used for manufacture of plaster and wallboard at the company's plant at Hagersville.
	Hagersville	..	..	Expanding	Lightweight aggregate (perlite)	Prepared for use in gypsum products.
Canadian Salt Company Limited, The Canada Cement Building 606 Cathcart Street, Suite 600 Montreal, Quebec H3B 1L6	Ojibway/U	1955	450 per hr	Crushing, screening	Rock salt	Salt is graded and prepared for markets.
	Windsor/S	1892	450	Triple-effect vacuum pan evaporation, fusion	Salt	

Domtar Inc. Domtar Chemicals Group 1136 Matheson Boulevard Mississauga, Ontario L4W 2V4	Goderich/S	1872	9 500 tonnes/ month	Quadruple-effect vacuum pan evaporation	Salt	
	Goderich/U	1959	170 000 tonnes/ month	Crushing, screening	Salt	
Domtar Inc. Domtar Construction Materials Division P.O. Box 789 Cornwall, Ontario K6H 5T5	Cornwall	1971	36	Expanding	Lightweight aggregate (perlite)	Used in fire resistant ceiling panels. Shut down December 1980.
Domtar Inc. Domtar Construction Materials Gypsum Division P.O. Box 250 Caledonia, Ontario N0A 1A0	Caledonia/U	1910 1980	1 100	Crushing, calcining	Gypsum	Gypsum is used for the manufacture of plaster and wallboard at the company's plant at Caledonia.
Domtar Inc. Domtar Construction Materials Division 3065 Mavis Road Mississauga, Ontario L5C 1T7	Mississauga/O	1927	75 500 yds^3	Expanding	Lightweight aggregate (expanded shale-haydite)	Shut down December 1980.
Extender Minerals of Canada Limited 6365 Northwest Drive Mississauga, Ontario L4V 1J8	Mine - Yarrow Twp./O Mill - Powell Twp. Matachewan	1974	20 000 tonnes/yr	Crushing, grinding, screening	Barite	
Gulf Canada Limited P.O. Box 460 Station "A" Toronto, Ontario M5W 1E5	Mississauga	1964	40	Oil refining	Sulphur	
Hedman Mines Limited P.O. Box 590 Timmins, Ontario P4N 7E7	Mine - Munro and Warden Twps./O Plant - Bowman Twp., Matheson	1969	270	..	Serpentine filler	The company has not yet reached full production.
IMC Industry Group (Canada) Ltd. P.O. Box 280 Havelock, Ontario K0L 1Z0	Blue Mountain, Havelock/O	1956	1 000	Crushing, magnetic separation, sizing	Nepheline syenite	Mill operates 3 shifts a day, 6 days a week; produces variety of products based on mesh size and iron content for many industrial uses.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ONTARIO (cont'd)						
Imperial Oil Limited Logistics Department 111 St. Clair Avenue West Toronto, Ontario M5W 1K3	Sarnia	1964/68	100	Oil refining	Sulphur	
Indusmin Limited (Ontario Silica Division) 365 Bloor Street East Suite 200 Toronto, Ontario M4W 3L4	Killarney/O (Badgeley Island)	1970	3 629	Crushing, screening, washing	Silica	Quartzite-lump shipped to Midland plant.
	Midland/O	1970	1 270	Dry milling	Silica	Silica sand and flour.
(Nepheline Syenite Division)	Nephton/O	1936	1 360	Crushing, magnetic separation, sizing, fine grinding	Nepheline syenite	Mill operates 3 shifts a day, 7 days a week, producing several grades of nepheline syenite to meet a wide variety of markets.
Lake Ontario Cement Limited P.O. Box 620 Picton, Ontario K0K 2T0	Picton/O	1958	1 497 000 tonnes/yr	Dry process	Cement	
National Slag Limited 139 Windermere Road Hamilton, Ontario L8H 3Y2	Hamilton	1954	760 m^3	Expanding	Lightweight aggregate (expanded slag)	Aggregate used in the production of concrete blocks and ready-mix concrete and for the manufacture of cementitious hydraulic slag.
St. Lawrence Cement Inc. 2391 Lakeshore Highway Mississauga, Ontario L5J 1K1	Mississauga/O	1956	2 000 000 tonnes/yr	Wet and dry process	Cement	
St. Marys Cement Limited (St. Marys Cement Company Division) 2200 Yonge Street Toronto, Ontario M4S 2C6	St. Marys/O	1912	1 030 000 tonnes/yr	Wet and dry process	Cement	
	Bowmanville/O	1968	630 000 tonnes/yr	Wet process	Cement	
Shell Canada Limited 505 University Avenue Toronto, Ontario M5G 1X4	Corunna	1966	12 000 tonnes/yr	Oil refining	Sulphur	Hydrogen sulphide in refinery gases is removed by diethanolamine absorption and sulphur produced by modified Claus process.
	Oakville	1963	10 000 tonnes/yr	Oil refining	Sulphur	

Steetley Talc Limited P.O. Box 1245 Timmins, Ontario P4N 7J5	Mine - Penhorwood Twp. 72 km SW of Timmins Plant - Timmins	1976	27 000 tonnes/yr	Crushing, flotation drying, grinding	Talc	Used in pulp and paper, paint, plastics, rubber and cosmetic/toiletry industries.
3M Canada Inc. (I.M.P. Division) P.O. Box 160 Havelock, Ontario KOL 1ZO	Havelock/O	1925	160/hr	Crushing, sizing, colouring	Traprock, roofing granules, commercial aggregates and fillers	
V.I.L. Vermiculite Inc. 310 Humberline Drive Rexdale, Ontario M9W 5S2	Rexdale	1975	..	Exfoliating	Insulation and lightweight aggregate (vermiculite)	
Westroc Industries Limited 2650 Lakeshore Highway Mississauga, Ontario L5J 1K4	Drumbo/U	1978	1 587	Crushing	Gypsum	Mining commenced December 1978.
	Mississauga, Peel County	1963	685	Crushing, calcining	Plaster and wallboard	Crude gypsum obtained from Ontario sources.
W.R. Grace & Co. of Canada Ltd. (Construction Products Division) 294 Clements Road West Ajax, Ontario L1S 3C6	Ajax	1973	12 000 tonnes/yr	Expanding	Lightweight aggregate (vermiculite)	Perlite aggregate used for cryogenic insulation, plaster aggregate and horticultural and industrial purposes. Vermiculite aggregate used for loose insulating, horticultural products, industrial vermiculite and fireproofing.
	Ajax	1978	6 000 tonnes/yr	Expanding	Perlite aggregate	
	St. Thomas	1954	4 000 tonnes/yr	Exfoliating	Lightweight aggregate (vermiculite)	
MANITOBA						
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Fort Whyte, near Winnipeg Plant No. 13	1911	466 000 tonnes/yr	Wet process	Cement	
	Steep Rock/O Plant No. 13A	..	907 200	Quarrying	Limestone	Handled by train to Plant No. 13 at Fort Whyte.
Domtar Inc. Domtar Construction Materials Division 1403 Sargent Street Winnipeg, Manitoba R3E OG6	Gypsumville/O	..	..	Crushing	Gypsum	Gypsum is shipped to company plants at Winnipeg.
	Winnipeg	1904	260	Crushing, calcining	Plaster and wallboard	
Genstar Cement Limited Box 249, Station 'C' Winnipeg, Manitoba R3M 3T2	Winnipeg/O	1965	310 000 tonnes/yr	Wet process	Cement	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
MANITOBA (cont'd)						
Kildonan Concrete Products Ltd. 221 Panet Road Winnipeg, Manitoba R2J 0S4	Winnipeg/O	1955	210 m^3	Expanding	Lightweight aggregate (expanded clay)	
Pembina Mountain Clays Incorporated 945 Logan Avenue Winnipeg, Manitoba R3E 1P3	Morden and Winnipeg/O	1940	..	Pulverizing, bleaching	Bentonite	Clay is mined and pulverized at Morden; the company's leaching plant in Winnipeg produces activated bleaching clay.
Steel Brothers Canada Ltd. 1325 Ellice Avenue Winnipeg, Manitoba R3G 0G1	Selkirk	1956	450	Drying, screening, and blending	Silica sand	Open pit operates from late May until late October. The sandstone is barged to the company's processing plant at Selkirk.
	Black Island, Lake Winnipeg/O	1956	1 360	Washing, attrition	Silica sand	
Westroc Industries Limited 2650 Lakeshore Highway Mississauga, Ontario L5J 1K4	Amaranth	1978	770	Crushing	Gypsum	Crude gypsum is shipped to the Company's calcining plant in Winnipeg and to other customers for use in the manufacture of gypsum products.
	Winnipeg	1930	270	Crushing, calcining	Plaster and wallboard	
W.R. Grace & Co. of Canada Ltd. (Construction Products Division) 294 Clements Road West Ajax, Ontario L1S 3C6	Winnipeg	1976	6 000	Expanding	Lightweight aggregate (vermiculite)	Aggregate used for loose insulating, horticultural products, industrial vermiculite and fireproofing.
SASKATCHEWAN						
Avonlea Mineral Industries Ltd. Suite 204 - 4401 Albert Street Regina, Saskatchewan S4S 6B6	Wilcox/O	1978	250	Drying, grinding, sizing	Sodium bentonite	Bentonite products prepared for iron ore pelletizing and foundry industries, oil well and water-well diamond drilling also civil engineering applications including slurry-wall, trenching and soil sealants. Quarry operates during summer months only.

Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Floral, Saskatoon Plant No. 10	1966	200 000 tonnes/yr	Grinding only	Cement	
Canadian Salt Company Limited, The Canada Cement Building 606 Cathcart Street, Suite 600 Montreal, Quebec H3B 1L6	Regina	1969	450	Filtering and drying	Salt	Plant utilizes sodium chloride produced at nearby potash solution mine of PPG Industries Canada Ltd.
Central Canada Potash Division of Noranda Mines Limited P.O. Box 1500 Colonsay, Saskatchewan S0K 0Z0	Colonsay/U	1969	1 400 000 tonnes/yr	Crushing, flotation	Potash	Two grades of muriate of potash (KCl) are produced; coarse and granular.
Cindercrete Products Limited P.O. Box 306 Regina, Saskatchewan S4P 3A1	Regina/O	1961	300 m^3 per day	Expanding	Lightweight aggregate (expanded clay)	Aggregate used in ready-mix concrete, concrete blocks and pre-cast shapes.
Cominco Ltd. (Potash Operations) Vanscoy, Saskatchewan S0L 3J0	Vanscoy/U	1969 1972 reopened	1 088 600 tonnes/yr	Crushing, flotation	Potash	Four grades of potash are produced: special standard, standard, coarse and granular.
Domtar Inc. Sifto Salt Division 1136 Matheson Boulevard Mississauga, Ontario L4W 2V4	Unity/S	1949	500	Triple-effect vacuum pan evaporation	Salt	
Francana Minerals Ltd. 670 Bank of Canada Building Regina, Saskatchewan S4P 0M8	Cabri (Grant Station)	1968	200	Dehydration, refining	Sodium sulphate (detergent grade)	
	Alsask (Hardene Station)	1974	127	Dehydration	Sodium sulphate (salt cake grade)	
Genstar Cement Limited P.O. Box 767 Victoria Plains Regina, Saskatchewan S4P 3A8	Regina/O	1956	204 000 tonnes/yr	Dry process	Cement	
Genstar Gypsum Limited 901 College Plaza Edmonton, Alberta T6G 2C8	Saskatoon	1967	650 000	Crushing, calcining	Wallboard	Crude gypsum is obtained from the mine of Westroc Industries Limited near Windermere, British Columbia.
International Minerals & Chemical Corporation (Canada) Limited Esterhazy, Saskatchewan S0A 0X0	K-1 Mine, Esterhazy/U	1962	5 350 (KCl)	Crushing, flotation	Potash	Five grades of muriate of potash are produced.
	K-2 Mine, Esterhazy/U	1967	6 040 (KCl)	Crushing, flotation	Potash	Six grades of muriate of potash are produced.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
SASKATCHEWAN (cont'd)						
Midwest Chemicals Limited P.O. Box 66 Edmonton, Alberta T5J 2G9	Palo/O	1936	450	Submerged combustion and drying	Sodium sulphate (salt cake)	
Ormiston Mining and Smelting Co. Ltd. 502 Scott Block Moose Jaw, Saskatchewan S6H 0B9	Ormiston	1930	270	Submerged combustion and drying	Sodium sulphate (salt cake)	
Potash Company of America (Division of Ideal Basic Industries, Inc.) P.O. Box 509 Saskatoon, Saskatchewan S7K 3L6	Saskatoon/U	1965	2 600 (KCl)	Crushing, flotation	Potash	Three grades of muriate of potash (KCl) are produced from the flotation circuit and one grade from a crystallizer circuit.
Potash Corporation of Saskatchewan Mining Limited (PCSML) (Allan Division) Allan, Saskatchewan S0K 0C0	Allan/U	1968	3 760 (KCl)	Crushing, flotation	Potash	Four grades of muriate of potash (KCl) are produced from the flotation circuit and two grades from a crystallizer circuit.
Potash Corporation of Saskatchewan Mining Limited Cory Division P.O. Box 1320 Saskatoon, Saskatchewan S7K 3N9	Saskatoon/U	1968	1 088 000 tonnes/yr	Crushing, flotation	Potash	Four grades of potash (KCl) are produced from the flotation circuit and two grades from a crystallizer circuit.
Potash Corporation of Saskatchewan Mining Limited Lanigan Division P.O. Box 3100 Lanigan, Saskatchewan S0K 2M0	Lanigan/U	1968	453 tonnes/hr	Crushing, flotation, screening	Potash	Coarse and granular muriate of potash (KCl) are produced as well as some standard.
Potash Corporation of Saskatchewan Mining Limited Rocanville, Saskatchewan S0A 3L0	Rocanville/U	1970	12 000	Flotation	Potash	Four grades of potash.
PPG Industries Canada Ltd. Kalium Chemical Division Regina, Saskatchewan S4P 0M9	Bell Plaine, near Moose Jaw/S	1964	3 720	Multiple-effect evaporation	Potash	Potash-rich solution is evaporated and crystallized to produce four grades of muriate of potash (KCl).

Saskatchewan Minerals (Sodium Sulphate Division) Chaplin, Saskatchewan SOH OVO	Chaplin/O	1948	500	Brine evaporation	Sodium sulphate (salt cake)	
	Ingebrigt/O	1967	500	Submerged combustion and drying	Sodium sulphate (salt cake) detergent grade	
	Bishopric/O	1974 reopened	360	Brine evaporation	Sodium sulphate (salt cake)	Closed in June 1977. Reopened March 1980.
Sybouts Sodium Sulphate Co., Ltd. Gladmar, Saskatchewan SOC 1AO	Gladmar/O	1941	35 000	Brine evaporation	Sodium sulphate (salt cake)	
ALBERTA						
Alberta Sulphate Limited 701 Imperial Bank Building Edmonton, Alberta T5J 1P6	Horseshoe Lake, Metiskow/U	1969	54 400 tonnes/yr	Solution recovery, evaporation	Sodium sulphate (detergent grade)	
Amerada Minerals Corporation of Canada Ltd. 540 - 5th Avenue South West Calgary, Alberta T2P OM2	Olds	1964	610	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by diethanolamine absorption. Sulphur is produced by modified Claus process.
Amoco Canada Petroleum Company Ltd. 444 - 7th Avenue South West Calgary, Alberta T2P OX8	Bigstone, Fox Creek	1968	356	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by sulfinol absorption; sulphur is produced by the modified Claus process.
	Crossfield	1968	1 626	Processing	Sulphur	
	Whitecourt	1962	1 290	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by diethanolamine absorption: sulphur is produced by a modified Claus process.
Baroid of Canada, Ltd. 840 - 7th Avenue South West Calgary, Alberta T2P 3G2	Onoway/O	1960	90 200	Grinding, sizing	Bentonite and barite	Production resumed in December 1978.
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Exshaw, Plant No. 12/O	1909 1981	1 200 000 tonnes/yr	Dry process	Cement	
	Cloverbar, Edmonton Plant No. 11	1955	200 000 tonnes/yr	Grinding	Cement	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ALBERTA (cont'd)						
Canadian Occidental Petroleum Ltd. 1600, 700 - 4th Avenue South West Calgary, Alberta T2P 3J5	Crossfield, Balzac	1961	850	Processing	Sulphur	Hydrogen sulphide is removed by DEA absorption. Sulphur is produced by modified Claus process.
Canadian Salt Company Limited, The Canada Cement Building 606 Cathcart Street, Suite 600 Montreal, Quebec H3B 1L6	Lindbergh/S	1948	330	Triple-effect vacuum pan evaporation, fusion	Salt	Produces coarse and fine salt.
Canadian Superior Oil Ltd. 3 Calgary Place 355 - 4th Avenue South West Calgary, Alberta T2P 0J1	Harmattan	1966	820	Processing	Sulphur	Hydrogen sulphide is removed by sulfinol absorption. Sulphur is produced by Claus process.
	Lone Pine Creek South	1971	137	Processing	Sulphur	Hydrogen sulphide is removed by diethanolamine absorption. Sulphur is produced by modified Claus process.
Canterra Energy Ltd. 1700 Selkirk House 555 - 4th Avenue South West Calgary, Alberta T2P 3J6	Rainbow Lake	1968 1979	150 100	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by amine absorption.
	Ram River	1972 1979	4 610 3 433	Processing	Sulphur	Hydrogen sulphide removed by DEA absorption. Sulphur produced by Claus process.
Canterra Energy Ltd. 1700 Selkirk House 555 - 4th Avenue South West Calgary, Alberta T2P 3J6	Okotoks	1959	376	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by monoethanolamine absorption. Sulphur is produced by modified Claus process.
CDC Oil & Gas Limited P.O. Box 1051 Calgary, Alberta T2P 2K7	Nordegg River	1970	40	Processing	Sulphur	Hydrogen sulphide is removed by DEA absorption. Sulphur produced by Claus process.
Chevron Standard Limited 500 - 5th Avenue South West Calgary, Alberta T2P 0L7	North Nevis	1959	262	Processing	Sulphur	Hydrogen sulphide is removed by DEA absorption. Sulphur is produced by the Claus process.
	Kaybob South	1972	3 114	Processing	Sulphur	

Consolidated Concrete Limited P.O. Box 5338, Station 'A' Calgary, Alberta T2H 2N8	Calgary/O	1954	460 m^3 per day	Expanding	Lightweight aggregate (expanded shale)	
Consolidated Concrete Limited (Masonry Division) P.O. Box 5060, Station 'E' Edmonton, Alberta T5P 4C1	Edmonton/O	1953	230 m^3 per day	Expanding	Lightweight aggregate (expanded clay)	
Domtar Inc. Domtar Construction Materials Division 1805 - 30th Avenue South East Calgary, Alberta T2G 4X8	Calgary	1930	400	Calcining	Plaster and wallboard	Gypsum is obtained from Westroc Industries quarry at Invermere, B.C.
Dresser Industries, Inc. (Dresser Minerals Division) Rosalind, Alberta TOB 3YO	Rosalind/O	1959	90	Crushing, sizing	Bentonite	Several types of bentonite products are prepared.
Esso Resources Canada Limited 500 Sixth Avenue South West Calgary, Alberta T2P OS1	Joffre	1972	28	Gas processing	Sulphur	Hydrogen sulphide is removed from natural gas by monoethanolamine absorption at Redwater, sulfinol absorption at Quirke Creek and amine absorption at Joffre. Sulphur is produced by the modified Claus process at Joffre and Quirke Creek and by the Claus process at Redwater.
	Quirke Creek	1971	300	Gas processing	Sulphur	
	Redwater	1956	24	Gas processing	Sulphur	
Genstar Cement Limited P.O. Box 2555 Edmonton, Alberta T5J 2T1	Plant - Edmonton Quarry - Cadomin/O	1956	565 000 tonnes/yr	Wet process	Cement	
Genstar Gypsum Limited 901 College Plaza 8215 - 112th Street Edmonton, Alberta T6G 2C8	Edmonton	1970	500	Crushing, calcining	Wallboard	Crude gypsum is obtained from the quarry of Westroc Industries Limited near Windermere, B.C.
Gulf Canada Resources Inc. P.O. Box 130 Calgary, Alberta T2P 2H7	Nevis	1956	286	Processing	Sulphur	In Nevis and Rimbey plants, hydrogen sulphide is removed from natural gas by monoethanolamine absorption, and in Pincher Creek and Strachan plants, by diethanolamine absorption. Sulphur in all plants is produced by the modified Claus process.
	Pincher Creek	1957	229	Processing	Sulphur	
	Rimbey	1961	366	Processing	Sulphur	
	Strachan	1971	845	Processing	Sulphur	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ALBERTA (cont'd)						
Home Oil Company Limited 2300, 324 - 8th Avenue South West Calgary, Alberta T2P 2Z5	Carstairs	1960	65	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by diethanolamine absorption. Sulphur is produced by modified Claus process.
Hudson's Bay Oil and Gas Company Limited 700 - 2nd Street South West Calgary, Alberta T2P 0X5	Brazeau River	1969	108	Processing	Sulphur	Hydrogen sulphide at the Sturgeon Lake plant is removed from natural gas by sulfinol absorption and at the Sylvan plant by monoethanolamine absorption. In the other plants, hydrogen sulphide is removed from natural gas by diethanolamine absorption. Sulphur is produced by the modified Claus process.
	Caroline	1968	18	Processing	Sulphur	
	Edson	1965	296	Processing	Sulphur	
	Kaybob South (two plants)	1968 1970	2 150	Processing	Sulphur	
	Lone Pine Creek	1966	238	Processing	Sulphur	
	Sturgeon Lake South	1969	96	Processing	Sulphur	
	Sylvan Lake	1968	11	Processing	Sulphur	
	Zama	1968	80	Processing	Sulphur	
Mobil Oil Canada, Ltd. P.O. Box 800 Calgary, Alberta T2P 2J7	Wimborne	1965	315	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by diethanolamine absorption. Sulphur is produced by modified Claus process.
Mountain Minerals Co. Ltd. P.O. Box 700 Lethbridge, Alberta T1J 3Z6	Mines: Brisco, Parson, Invermere, Moberly Plant: Lethbridge	1947	317	Pulverizing, sizing	Barite, silica, and other minerals	Mined barite underground from vein deposits at Parson and Brisco, B.C., and recovered crude barite from a tailings pond at Mineral King Mine near Invermere. The barite is shipped to Lethbridge for processing; shale and other minerals are sized in the plant. Silica is processed at a plant near Golden, B.C.
Petro-Canada Exploration Inc. 650 Guiness House P.O. Box 2844 Calgary, Alberta T2P 2M7	Gold Creek	1970	25	Processing	Sulphur	Hydrogen sulphide is removed by DEA absorption.

Petro-Canada Enterprises Inc. 736 - 8th Avenue South West Calgary, Alberta T2P 1H4	Wildcat Hills	1961	162	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by monoethanolamine absorption. Sulphur is produced by modified Claus process.
Saratoga Processing Company Limited 1212 One Pallister Square Calgary, Alberta T2G 0P6	Coleman	1962	386	Processing	Sulphur	Hydrogen sulphide is removed by MEA absorption. Sulphur is removed by modified Claus process.
Shell Canada Resources Limited P.O. Box 100 Calgary, Alberta T2P 2H5	Burnt Timber	1970	510	Processing	Sulphur	At Burnt Timber, Simonette, Waterton and Rosevear plants, hydrogen sulphide is removed from natural gas by sulfinol absorption and at Bowden plant by monoethanolamine absorption. Cochrane plant employs both processes. In all plants, sulphur is produced by the modified Claus process.
	Bowden	1960	160	Processing	Sulphur	
	Cochrane	1951	510	Processing	Sulphur	
	Rosevear	1979	180	Processing	Sulphur	
	Simonette	1969	210	Processing	Sulphur	
	Waterton	1962	2 900	Processing	Sulphur	
Sil Silica Ltd. 9305 - 50th Street Edmonton, Alberta T6B 2L5	Bruderheim/O	1971	400	Washing, drying, screening	Silica	Used in the manufacturing of fiberglass, molds and sandblasting.
Sulpetro Limited 3200 - 255 - 5th Avenue Calgary, Alberta T2P 3G6	Buck Lake	1967	50	Processing	Sulphur	Hydrogen sulphide is removed by MEA absorption. Sulphur is produced by modified Claus process.
Suncor Inc. P.O. Box 38 Calgary, Alberta T2P 2V5	Rosevear	1975	82	Processing	Sulphur	Hydrogen sulphide removed from natural gas by chemical (DEA) absorption and converted to elemental sulphur in a Claus plant.
Suncor Inc. Box 4001 Fort McMurray, Alberta T9H 3E3	Fort McMurray	1967	350	Refining	Sulphur	Sulphur recovery from synthetic crude by hydrodesulphurization.
	Edmonton	..	40	Oil refining	Sulphur	
Texaco Canada Resources Ltd. 605 - 5th Avenue South West Calgary, Alberta T2P 2P8	Pigeon Lake	1954	15	..	Sulphur	Hydrogen sulphide removed by amine absorption. Sulphur produced by modified Claus process. Sulphur section added to mill in 1974.

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
ALBERTA (cont'd)						
Westcoast Transmission Company Limited 1333 West Georgia Street Vancouver, British Columbia V6E 3K9	Coleman	..	400	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by MEA absorption and DEA absorption. Sulphur is produced by the Claus and Sulfreen process.
Western Decalta Petroleum (1977) Limited P.O. Box 2404 639 - 6th Avenue South West 19th Floor Calgary, Alberta T2P 2M7	Turner Valley	1933	10	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by monoethanolamine absorption. Sulphur is produced by the modified Claus process.
Westroc Industries Limited 2650 Lakeshore Highway Mississauga, Ontario L5J 1K4	Calgary	1946	400	Crushing, calcining	Plaster and wallboard	Gypsum obtained from Windermere, B.C.
W.R. Grace & Co. of Canada Ltd. (Construction Products Division) 294 Clements Road West Ajax, Ontario L1S 3C6	Edmonton	1971	11 000 tonnes/yr	Exfoliating	Lightweight aggregate (vermiculite)	Aggregate used for loose insulating, horticultural products, industrial vermiculite, and fireproofing.
BRITISH COLUMBIA						
Baroid of Canada, Ltd. 850, 703 6th Avenue South West Calgary, Alberta T2P 1Z2	Spillimacheen	1961	90	Tabling	Barite	
Canada Cement Lafarge Ltd. P.O. Box 490, Station 'B' Montreal, Quebec H3B 3K3	Richmond Plant No. 15/0	1958	480 000 tonnes/yr	Wet process	Cement	
	Kamloops Plant No. 14/0	1970	187 000 tonnes/yr	Dry process	Cement	
	Vananda No. 15A/0	..	..	Quarry	Limestone	Shipped to Richmond by barge.
Cassiar Resources (Division of Brinco Mining Limited) 1055 West Hastings Street Vancouver, British Columbia V6E 3V3	Cassiar/O	1953	4 000	Dry milling	Chrysotile asbestos	Asbestos fibre is extracted from ore by crushing, screening and aspiration; asbestos fibre is graded as to length and quality.

Domtar Inc. Domtar Construction Materials Division 3355 Grandview Highway Vancouver, British Columbia V5M 1Z5	Surrey	1920	85 000 tonnes/yr	Calcining	Gypsum wallboard	Gypsum for the plant is produced in Mexico and Canada.
Genstar Cement Limited 7777 Ross Road P.O. Box 950 Delta, British Columbia V4K 3S6	Delta	1978	1 000 000 tonnes/yr	Dry proces	Cement	
Genstar Gypsum Limited 8215 - 112 Street 901 College Plaza Edmonton, Alberta T6G 2C8	Vancouver	1975	410	Crushing, calcining	Wallboard	Crude gypsum is obtained from the mine of Westroc Industries Limited near Windermere, B.C.
Imperial Oil Limited Logistics Department 111 St. Clair Avenue West Toronto, Ontario M5W 1K3	Port Moody	1974	20	Refinery	Sulphur	
Industrial Mineral Products (B.C.) Ltd. P.O. Box 2026 New Westminster, British Columbia V3L 5A3	Burnaby	1961	163	Crushing, sizing	Roofing granules, lime powder, talc	Custom grinding
Pacific Silica Products P.O. Box 39 Oliver, British Columbia V0H 1T0	Oliver/O	1965	90	Crushing, sizing, washing	Pacific white silica products, roofing and stucco chips/ dash, filter sand, ornamental rock, nursery decorative blasting sand	
Shell Canada Limited 505 University Avenue Toronto, Ontario M5G 1X4	Vancouver	1968	16	Oil refining	Sulphur	Hydrogen sulphide in refinery gases is removed by diethanolamine absorption and sulphur is produced by modified Claus process.
Westcoast Transmission Company Limited 1333 West Georgia Street Vancouver, British Columbia V6E 3K9	Fort Nelson	1975	408	Processing	Sulphur	Hydrogen sulphide is removed from natural gas by MEA absorption and DEA absorption. Sulphur is produced by the Claus and Sulfreen process.
	Taylor	1957	300	Same	Same	
	Pine River	1980	1 000	Same	Same	

Operator	Location of Plant or Mine/Type	Mill Started	Mill* Capacity	Process	Products	Remarks
BRITISH COLUMBIA (cont'd)						
Westroc Industries Limited 2650 Lakeshore Highway Mississauga, Ontario L5J 1K4	Windermere Creek, Invermere/O	1957	3 200	Crushing	Gypsum	Crude gypsum is shipped to the company's calcining plants in Vancouver and Calgary, and to other customers for use in the manufacture of gypsum products.
	Vancouver	1960	270	Calcining	Plaster and wallboard	Gypsum obtained from Windermere Creek, B.C.
	Vancouver	1961	9	Expanding	Lightweight aggregates (perlite)	Operation disbanded.
W.R. Grace & Co. of Canada Ltd. (Construction Products Division) 294 Clements Road West Ajax, Ontario L1S 3C6	Vancouver	1945	7 200 tonnes/yr	Exfoliating	Lightweight aggregate (vermiculite)	Aggregate used for loose insulating, horticultural products, industrial vermiculite and fireproofing.
YUKON TERRITORY						
Cassiar Resources (Division of Brinco Mining Limited) 1055 West Hastings Street Vancouver, British Columbia V6E 3V3	Clinton Creek/O	1967	6 350	Dry milling	Chrysotile asbestos	Mining and milling operations closed August 1978. Presently disposing of assets and completing environmental requirements.
Yukon Barite Company Ltd. General Delivery Ross River, Yukon Territory YOB 1SO	Tea Mine near MacMillan Pass NWT/O		18 140 tonnes/yr	Screening grinding	Barite	Mine closed 1979.

Operator	Quarry or Plant Location	Crushing/ Calcining Capacity (tonnes/day)	No. of Kilns V - Vertical R - Rotary O - Other	Products	If Stone Is Purchased From Where, Whom Predominant Usage
LIME PRODUCERS					
NEW BRUNSWICK					
Havelock Lime Works Ltd. Havelock, Kings County New Brunswick EOA 1WO	Havelock	2 180/		Aglime, filler, crusher stone, high calcium stone, mine dust, pulverized limestone	Used in mining, industrial filler, pulp and paper mills, glass manufacture and agriculture.
Havelock Processing Ltd. Havelock, Kings County New Brunswick EOA 1WO	Havelock	../168	R-1	Quick lime, hydrated lime	Havelock Lime Works Ltd., Havelock, N.B.
QUEBEC					
Domlim Inc. 475 Place Trans-Canada Longueuil, Quebec J4G 1P4	Lime Ridge, St. Adolphe de Dudswell	2 250/ 400	V-6	High calcium lime	Pulp and paper, steel industry and pH control.
Domtar Inc. Domtar Chemicals Group (Lime Division) 395 de Maisonneuve Boulevard West Montreal, Quebec H3C 3M3	Joliette	6 000/ 800	R-3	Quicklime, hydrated lime, pulverized limestone	Steel, paper, chemical, mining, aluminum and agricultural industries.
Gulf Canada Limited (Chemicals Division) 800 Bay Street Toronto, Ontario M5S 1Y8	Bedford	2 000/		Limestone	Chemical industry, glass industry, animal feed, fertilizers, agriculture and construction.
	Shawinigan	../540	R-5	High calcium lime, hydrated lime, carbide residue	Crushed limestone provided by company's Bedford quarry.
Quebec Sugar Refinery 100 rue de la Raffinerie Mont St. Hilaire, Quebec J3H 4G6	Mont St. Hilaire	90/ 45	V	Hydrated lime	Gulf Canada Limited, Bedford, Quebec.

Operator	Quarry or Plant Location	Crushing/ Calcining Capacity (tonnes/day)	No. of Kilns V - Vertical R - Rotary O - Other	Products	If Stone Is Purchased From Where, Whom Predominant Usage
ONTARIO					
Algoma Steel Corporation, Limited, The Queen Street West Sault Ste. Marie, Ontario P6A 5P2	Sault Ste. Marie	../544	R	Burnt lime and burnt dolomite	Limestone purchased from United States Steel Corporation, Roger City and Presque Isle - Stoneport, Michigan. Dolomite purchased from Drummond Dolomite Incorp., Drummond Island, Michigan.
	Sault Ste. Marie	../218	O-Calcimatic	Burnt dolomite and burnt lime	
Allied Chemical Canada, Ltd. 201 City Centre Square Mississauga, Ontario L5B 2T4	Amherstburg	2 540/ 870	V-5	High calcium lime	Lime produced for captive use.
BeachviLime Limited P.O. Box 190 Ingersoll, Ontario N5C 3K5	Beachville	5 080/ 1 225	R-2 O-1	Calcined lime, pulverized limestone, sized limestone	Lime is used mostly in steel industry; limestone is used in glass industry and agricultural products. The quarry is owned by Dofasco Inc.
Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Haley	450/ 145	R-2	Calcined dolomite	For internal production of magnesium metal.
Domtar Inc. Domtar Chemicals Group (Lime Division) 395 de Maisonneuve Boulevard West Montreal, Quebec H3A 1L6	Hespeler	910/ 180	V-10	Dolomitic lime products	Closed 1980.
Guelph DoLime Limited P.O. Box 217 Ingersoll, Ontario N5C 3K5	Guelph	800/ 325	V-12	Quick lime, hydrated lime	Subsidiary of BeachviLime Limited, Ingersoll, Ontario.
Reiss Lime Company of Canada, Limited Royal Bank Plaza Toronto, Ontario M5J 2K2	Spragge	../550	R-2	Lime	United States Steel Corporation, Rogers City, Michigan.

Stelco Inc. Box 98 Ingersoll, Ontario N5C 3K1	Ingersoll	3 260/ 552	V-3x95 R-1x330	High calcium limestone, lime	Used mostly in iron and steel making.
Steetley Industries Limited Minerals Group P.O. Box 2029 605 James Street North Hamilton, Ontario L8N 3S9	Niagara Falls/O	244/..		Crushed dolomite	Aggregates for asphalt, concrete and road building.
	Dundas	1 000/..	R-3	Dead burnt dolomite, dolomitic lime, refractory lime	Metallurgical and glass industries.
	Dundas/O	1 600/..		Dolomite	Various grades of crushed and pulverized dolomite used in agriculture, construction, glass, fillers and metallurgy industries.
MANITOBA					
Manitoba Sugar Company, Limited, The 555 Hervo Street Winnipeg, Manitoba R3T 3L6	Fort Garry	../45	V-1	Lime	Limestone is purchased from Steel Brothers Canada Ltd., Winnipeg, Manitoba. Lime is produced for the company's own use.
Steel Brothers Canada Ltd. 1325 Ellice Avenue Winnipeg, Manitoba R3G 0G1	Faulkner	1 800/ 320	R-1	Crushed stone, high calcium quick lime dolomitic lime	Dolomitic stone purchased from Nelson River Construction from their Hilbre Quarry.
ALBERTA					
Alberta Sugar Company 306 - 10th Street South Lethbridge, Alberta T1J 2M6	Taber	../180	V-2	High calcium lime	Limestone purchased from Summit Lime Works Limited.
	Picture Butte	../90	V-1		
Steel Brothers Canada Ltd. 215 - 10451 Shellbridge Way Richmond, British Columbia V6X 2W8	Kananaskis	1 270/ 360	R-2	Pebble lime, crushed lime, hydrated lime, calcium carbonate powders	
Summit Lime Works Limited P.O. Box 40 Coleman, Ontario T0K 0M0	Hazell	1 200/ 100	V-2	Crushed lime, hydrated lime, pulverized lime, pulverized limestone	Building, mining, water and sewage, glass manufacture, industrial filler, feed.

Operator	Quarry or Plant Location	Crushing/ Calcining Capacity (tonnes/day)	No. of Kilns V - Vertical R - Rotary O - Other	Products	If Stone Is Purchased From Where, Whom Predominant Usage
BRITISH COLUMBIA					
Steel Brothers Canada Ltd. 215 - 10451 Shellbridge Way Richmond, British Columbia V6X 2W8	Pavilion Lake	1 540/ 290	R-1	Pebble lime, crushed lime	
Texada Lime Ltd. 20303 - 102nd Avenue Langley, British Columbia V6E 3L2	Langley	300	Calcimatic-Z	High calcium quick lime, sized limestone	

PART 2

METALLURGICAL WORKS IN CANADA
NONFERROUS AND PRECIOUS METALS

Operator	Location of Plant	Annual Rated Capacity (tonnes)	Product	Remarks
ALUMINUM				
Alcan Smelters and Chemicals Limited 1, Place Ville Marie Montreal, Quebec H3C 3H2	Jonquière, Quebec	432 000	Primary aluminum, pure or alloyed. Forms: hot metal, ingot for remelting, extrusion billets, rolling blocks, wire bars for fabrication. Brand Alcan.	Aluminum smelter. Inorganic chemical complex. Petroleum coke calcining plant.
	Beauharnois, Quebec	47 000		Aluminum smelter.
	Shawinigan, Quebec	84 000		Aluminum smelter.
	Alma, Quebec	73 000		Aluminum smelter.
	Ville La Baie, Quebec	57 000		Aluminum smelter.
	Kitimat, British Columbia	268 000		Aluminum smelter. Petroleum coke calcinating plant.
Canadian Reynolds Metals Company, Limited 1100 Sherbrooke Street West Montreal, Quebec H3A 1G7	Baie Comeau, Quebec	154 000	Primary aluminum, pure or alloyed in ingot forms for remelting or extrusion billets, rolling blocks, wire bars for fabrication. Brand CRM	
ANTIMONIAL-LEAD				
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	820 (antimony)	"Cominco Brand" in 85-pound pigs. Antimony content 19%. Arsenic content 2% to 5%	Reduction and refining furnaces for treating lead drosses from lead cathode purification and high-antimony dust from silver refinery.
BISMUTH				
Brunswick Mining and Smelting Corporation Limited, Smelting Division Belledune, New Brunswick E0B 1G0	Belledune, New Brunswick	200	Bismuth crystals 45% bismuth	Produced as a byproduct of lead smelting.
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	180	"Tadanac Brand" in 28-pound bars and shot (intermittent operation) (99.99%)	Bismuth-lead copper slags from silver refining treated by Parkes process and chlorination process to produce residual high purity bismuth.

CADMIUM

Canadian Electrolytic Zinc Limited 860 Cadieux Boulevard Valleyfield, Quebec J6S 4W2	Valleyfield, Quebec	550	Metallic cadmium, sold as "CEZ Brand" in stick, ball, sponge and mossy	Cadmium precipitate from zinc refinery is leached and precipitated as sponge, briquetted and cast.
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	640	"Tadanac Brand" in ball, stick, bar, and extrusion as required	Cadmium precipitates from zinc refining is leached and the metal is recovered by cementation.
Hudson Bay Mining and Smelting Co., Limited Head Office P.O. Box 28 Toronto-Dominion Centre Toronto, Ontario M5K 1B8	Flin Flon, Manitoba	160	Metallic cadmium in ball anode and stick form	Cadmium precipitate from zinc refining is leached and the metal is recovered by electrolysis.
Texasgulf Metals Company Kidd Creek Mines Ltd. P.O. Box 175, Commerce Court Toronto, Ontario M5L 1E7	Timmins, Ontario	450	Metallic cadmium, Tg brand in ball and stick form	Cadmium precipitated from zinc solution, purified and cast.

CALCIUM

Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Haley, Ontario	900	Calcium - lumps, ingots, billets, granules, rods	Reduction of lime by aluminum under high vacuum in electric retort furnaces.

COBALT

Inco Metals Company P.O. Box 44 1 First Canadian Place Toronto, Ontario M5X 1C4	Port Colborne, Ontario	770	Cobalt oxide	Cobalt oxide recovered from nickel refinery electrolyte and electrowin from Copper Cliff nickel refinery residue.
	Thompson, Manitoba	320	Cobalt oxide	Cobalt oxide recovered from nickel refinery electrolyte.
Sherritt Gordon Mines Limited P.O. Box 28 Commerce Court West Toronto, Ontario M5L 1B1	Fort Saskatchewan, Alberta	550	Refined cobalt metal and nickel in briquette, powder and strip forms	Cobalt recovered from purchased materials.

Operator	Location of Plant	Annual Rated Capacity (tonnes)	Product	Remarks
COPPER				
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	4 000	Copper-lead matte (granular)	Continuous drossing furnace.
Falconbridge Nickel Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Falconbridge, Ontario	600 000 (ores and concentrates)	Copper-nickel matte	Copper-nickel ore and prepared concentrates smelted in blast furnaces and converted to produce matte for shipment to company's electrolytic refinery in Norway.
Hudson Bay Mining and Smelting Co., Limited Head Office P.O. Box 28 Toronto Dominion Centre Toronto, Ontario M5K 1B8	Flin Flon, Manitoba	520 000 (ores and concentrates)	Anode copper	Roasting furnaces, one reverberatory furnace and three converters for treating copper flotation concentrates and zinc-plant residues, in conjunction with slag fuming furnaces.
Inco Metals Company P.O. Box 44 1 First Canadian Place Toronto, Ontario M5X 1C4	Sudbury, Ontario	500 000 (concentrates)	Blister copper, for company's refinery	Oxygen flash smelting of copper sulphide concentrates. Copper converters produce blister copper. Through flotation separation of copper-nickel in bessemer matte, copper sulphides returned for additional blister copper production.
Noranda Mines Limited P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Noranda, Quebec	180 000	"ORC Brand" electrolytic copper, cathodes, wire bars, cakes and billets	Blister copper refined by electrolysis. Recovers and electrowins copper from nickel refinery residue.
		1 090 000 (ores, concentrates and scrap)	Copper anodes	Roasting furnaces, three reverberatories, five converters and one Noranda Continuous Reactor. Also smelts custom materials.
Noranda Mines Limited C.C.R. Division P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Montreal East, Quebec	480 000	Electrolytic Copper "C.C.R. Brand" wire bars, ingot bars, ingots, cathodes, cakes and billets	Refines anode copper from Noranda, Gaspé and Flin Flon smelters, and purchased scrap and blister.
		14 000	Copper sulphate by vacuum evaporation and crystallization, "Noranda Brand" in regular commercial and agricultural grades	

Noranda Mines Limited Mines Gaspé Division P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Murdochville, Quebec	340 000	Copper anodes	One reverberatory furnace for wet charge concentrates, two Pierce-Smith converters, one anode furnace and one Walker casting wheel. Also smelts custom materials.
INDIUM				
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia		Cominco Brand standard grade ingots and shot, 99.999 grade ingots, 10 and 100 troy ounces	Byproduct of zinc-lead production.
LEAD				
Brunswick Mining and Smelting Corporation Limited Smelting Division Belledune, New Brunswick EOB 1GO	Belledune, New Brunswick	71 000	Refined lead	Lead blast furnace.
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	145 000 (refined lead)	Refined lead "Tadanac Brand" in 100 and 2,000-pound pigs	Concentrate is sintered, then smelted in two blast furnaces. Slag treated in fuming plant. Betts electrolytic process.
MAGNESIUM				
Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Haley, Ontario	11 000	High purity magnesium and magnesium alloy. Ingots, billets, extrusions and granules	Magnesium is produced by thermal methods involving the reduction of calcined dolomite by ferro-silicon under high vacuum in electric retort furnaces. Other metals produced are: calcium, strontium, barium, titanium, zirconium, thorium. The magnesium capacity was increased to 11 000 tonnes with conversion from electrical to natural gas heating furnaces.
MERCURY				
Johnson Matthey Limited Chemical Division 130 Glidden Road Brampton, Ontario L6W 3M8	Brampton, Ontario		Distilled mercury	Technical double and triple distilled grades for industrial and dental uses.
MOLYBDENUM				
Eldorado Gold Mines Inc. P.O. Box 10 Duparquet, Quebec JOZ 1WO	Duparquet, Quebec	8 100 (contained Mo)	Molybdic oxide	Treats molybdenite concentrates (custom roasting), converts molybdic oxide to ferromolybdenum by silicothermic method.

Operator	Location of Plant	Annual Rated Capacity (tonnes)	Product	Remarks
MOLYBDENUM (cont'd)				
Placer Development Limited (Endako Mines Division) 700 Burrard Building 1030 West Georgia Street Vancouver, British Columbia V6E 3A8	Endako, 16 kilometres west of Fraser Lake	6 350 Roaster 10 800 (contained Mo)	Molybdenite conc, molybdic oxide	All of the molybdenite conc is roasted to convert molybdenite to molybdic oxide; sold on domestic and foreign markets. Surplus roasting capacity is used for custom roasting.
NICKEL				
Falconbridge Nickel Mines Limited P.O. Box 40 Commerce Court West Toronto, Ontario M5L 1B4	Falconbridge, Ontario	600 000 (ores and concentrates)	Copper-nickel matte	Copper-nickel ore and prepared concentrates smelted in blast furnaces and converted to produce matte for shipment to company's electrolytic refinery in Norway.
Inco Metals Company P.O. Box 44 1 First Canadian Place Toronto, Ontario M5X 1C4	Sudbury, Ontario	2 100 000 (concentrates)	Copper-nickel bessemer matte	Herreschoff roasters and reverberatory furnaces smelt nickel-copper conc. Converters produce bessemer matte.
			Nickel sulphide and nickel oxide sinter for company's refineries Nickel oxide sinter 75 and Incomet nickel for market	Nickel-copper sulphides separated through flotation; nickel sulphide product fluid-bed roasted for refining and marketing. Nickel oxide sinter through chlorination and reduction produces Incomet nickel.
		56 800	Nickel pellets, nickel powders and iron-nickel powders for market	Metallic copper-nickel concentrate refined by Kaldo top blown rotary converters and Inco pressure carbonyl process.
			Nickel refinery residue Nickel sulphate	Recovered from Copper Tank House solutions.
	Port Colborne, Ontario	68 000	Inco electrolytic nickel as cathode plates, rounds and shot for market; nickel magnesium alloys	Anode furnace producing nickel anodes for electrolytic refining to pure nickel cathodes.
	Thompson, Manitoba	1 270 000 (concentrates)	Nickel sulphide anodes	Fluid bed roasting, electric furnace smelting followed by converting to nickel matte which is cast into anodes.
	Thompson, Manitoba	45 500	Inco electrolytic nickel	Electrolytic refining of nickel sulphide anodes to pure nickel cathodes for market. Cobalt oxide is also produced.

Sherritt Gordon Mines Limited P.O. Box 28 Commerce Court West Toronto, Ontario M5L 1B1	Fort Saskatchewan, Alberta	16 400 (nickel)	Refined nickel briquettes, powder and strip	Chemical metallurgical plant employing pressure ammonia leach and hydrogen reduction processes. Also ammonia, ammonium sulphate, ammonium phosphates, and urea plants. Refined cobalt metal, composite metal powders and copper sulphide are produced. Includes metal powder rolling plant and coinage mint. Also treats custom ores.
PRECIOUS METALS				
Brunswick Mining and Smelting Corporation Limited Smelting Division Belledune, New Brunswick E0B 1G0	Belledune, New Brunswick	77 700 kg	Silver doré	Fire refining.
Canadian Smelting & Refining (1974) Limited Suite 301 - 2161 Yonge Street Toronto, Ontario M4S 3A6	Coleman Township, Cobalt, Ontario	93 300 kg	Silver "C.S.R. Brand" in 1,000-oz bars Fineness 995 High purity silver	Custom smelter - silver recovered from cobaltiferous - arsenical type concentrates by a hydro-metallurgical process.
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	3 117 kg 435 400 kg	High purity gold Silver "Tadanac Brand" in 1,000-oz bars. Silver crystals available. High purity silver also available	Recovers precious metals from own and custom ores as byproduct of lead refinery. Also custom refining.
Delta Smelting & Refining Co. Ltd. 2200 Shell Road Richmond, British Columbia V6X 2P1	Richmond, British Columbia	Gold 12 500 kg Silver 32 500 kg	Refiners of gold and silver, platinum group metals, casting alloys to 999.5 minimum fineness	Producers and suppliers of high purity gold, silver and their alloys. Recovery of precious metals from scrap, sweeps, and high grade concentrates.
Engelhard Industries of Canada Limited 100 Engelhard Drive Aurora, Ontario L4G 3N1	Aurora, Ontario		Refiners of gold, silver and platinum group metals and producers of alloys in sheet, coin blanks, bars, wire, tubing, salts, solders, etc., as well as other manufactured and semi-manufactured forms	Producers and suppliers of precious metals and their alloys for use in the arts and industry by mints, industry and for investment. Recovery of precious metals from scrap and dross.
Handy & Harman of Canada, Limited 141 John Street Toronto, Ontario M5V 2E4	Toronto, Ontario		Silver, gold, platinum refiners. Gold and silver sheet and wire; alloy and solders	Precious metals and alloys produced for use in arts and industry. Recovery of precious metals from scrap and dross.

Operator	Location of Plant	Annual Rated Capacity (tonnes)	Product	Remarks
PRECIOUS METALS (cont'd)				
Hudson Bay Mining and Smelting Co., Limited Head Office P.O. Box 28 Toronto Dominion Centre Toronto, Ontario M5K 1B8	Flin Flon, Manitoba	Gold 2 333 000 g Silver 31 000 kg	Anode copper containing gold and silver	Gold and silver recovered from the anode copper at Canadian Copper Refiners Limited is returned to Hudson Bay for marketing.
Inco Metals Company P.O. Box 44 1 First Canadian Place Toronto, Ontario M5X 1C4	Sudbury, Ontario		Fine gold and silver platinum group metals concentrate Platinum group metals concentrate	After electro-refining of copper nickel, recovered as byproduct from slimes. Recovered as a byproduct from Copper Cliff nickel refinery residue.
Johnson Matthey Limited 110 Industry Street Toronto, Ontario M6M 4M1	Toronto, Ontario		Refined gold, silver and platinum group metals and alloys in sheet, coin blanks, bars, wire, tubing salts, solders, etc., as well as other manufactured and semi-manufactured forms. Minted items.	Producers and suppliers of precious metals and their alloys for use in the arts, by mints, industry and for investment. Recovery of precious metals from scrap and dross.
Johnson Matthey Limited Chemical Division 130 Glidden Road Brampton, Ontario L6W 3M8	Brampton, Ontario	Gold - 7 500 000 g Silver - 250 000 kg Platinum metals - 1 555 000 g	Refiners of gold, silver and platinum group metals, producers of precious metal chemicals	Treating base bullion from mines also recycling and recovery of precious metals from industrial scrap and waste.
Noranda Mines Limited C.C.R. Division P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Montreal East, Quebec	Gold - 22 400 000 g Silver - 930 000 kg	"C.C.R. Brand" fine gold and silver recovered electrolytically from slimes. Gold - "kilo" bars and 400-oz bars	
Royal Canadian Mint 355 River Road Ottawa, Ontario K1A 0G8	Ottawa, Ontario	217 000 000 g	Refiners of gold	Treats base bullion from Canadian, U.S. and foreign mines, as well as scrap, drosses, etc. Customer's product refined to 0.995 or 0.9999 fine.

SELENIUM AND TELLURIUM

Inco Metals Company P.O. Box 44 1 First Canadian Place Toronto, Ontario M5X 1C4	Copper Cliff, Ontario	82 000 kg 8 200 kg	Selenium powders (over 99.5% selenium)	Recovered as a byproduct from slimes resulting from electro-refining of copper.
			Tellurium dioxide powder	Recovered as a byproduct from slimes resulting from electro-refining of copper.
Noranda Mines Limited C.C.R. Division P.O. Box 45 Commerce Court West Toronto, Ontario M5L 1B6	Montreal East, Quebec	340 000 kg	"Noranda Brand" commercial grade and high purity selenium, selenious acid, sodium selenate, sodium selenite and iron selenide	Recovered as byproducts from slimes in electrolytic refining of copper anodes produced at Noranda and Gaspé smelters and by Hudson Bay Mining and Smelting Co., Limited.
		34 300 kg	"Noranda Brand" commercial grade tellurium powder, stick, lumps and tellurium dioxide	

STRONTIUM

Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Haley, Ontario	45 350 kg	"Chromasco Brand" Strontium metal 99%	Oxide reduction process.

TITANIUM

Kennametal Inc., Macro Division 1651 Kingsway Avenue Port Coquitlam, British Columbia V3C 1S3	Port Coquitlam, British Columbia		Titanium carbide	
QIT-Fer et Titane Inc. P.O. Box 560 Sorel, Quebec J3P 5P6	Sorel, Quebec	865 000 601 000	Titanium dioxide slag (SORELSLAG) High grade iron (SORELMETAL)	Smelts ilmenite ores from Allard Lake in nine electric furnaces to produce high TiO_2 slag (SOREL-SLAG) and titanium pig iron (SORELMETAL)

TUNGSTEN

Kennametal Inc. Macro Division 1651 Kingsway Avenue Port Coquitlam, British Columbia V3C 1S3	Port Coquitlam, British Columbia		Tungsten carbide powders, tungsten metal powder, tungsten matrix powders, tungsten titanium carbide, tungsten carbide hard-facing powders	Electric smelting and chemical methods used to produce tungsten and titanium carbide and products. Also refines tantalite and columbite ore concentrates to produce tantalum-columbium hard carbides for the cemented carbide industry.

Operator	Location of Plant	Annual Rated Capacity (tonnes)	Product	Remarks
URANIUM				
Eldorado Nuclear Limited Head Office Suite 400 255 Albert Street Ottawa, Ontario K1P 6A9	Port Hope, Ontario	6 000	Uranium trioxide powder (UO_3)	Uranium mill concentrates are refined to nuclear purity UO_3 through solvent extraction.
		1 200	Ceramic powder (UO_2) - natural, enriched or depleted	UO_3 is converted to UO_2, ready for pressing and sintering to form pellets for CANDU nuclear fuel.
		1 500	Uranium metal and alloys - natural, enriched or depleted	Magnesium reduction is used to reduce UF_4 to metal. Vacuum melting, casting and machining to various forms.
		4 500	Uranium hexafluoride (UF_6)	UO_3 is converted to UF_6 for export markets.
ZINC				
Canadian Electrolytic Zinc Limited 860 Cadieux Boulevard Valleyfield, Quebec J6S 4W2	Valleyfield, Quebec	218 000	Slab zinc "CEZ Brand" in all grades. Regular and jumbo shapes	Roasting of zinc concentrates with production of sulphuric acid. Leaching of calcine and electrowinning of zinc. Cathode zinc melted and cast according to customer specifications.
Cominco Ltd. 200 Granville Street Vancouver, British Columbia V6C 2R2	Trail, British Columbia	250 000	Zinc "Tadanac Brand" in 56 lb slabs in industry-recognized grades. Jumbo slabs 2,000 and 2,400 lbs each. C-cast jumbos @ 100 lb per inch, and anodes for cathodic protection	Roasting of zinc concentrates followed by leaching and refined zinc production by electrolysis. Cathodes melted and zinc cast in slabs.
Texasgulf Metals Company Kidd Creek Mines Ltd. Box 175, Commerce Court Toronto, Ontario M5L 1E7	Timmins, Ontario	110 000	Slab zinc, special high grade, high grade and prime western of Tg brand in 55 lb slabs and various larger ingots	Roasting of zinc concentrates, leaching and electrolysis of solution. Cathodes melted and cast to customer needs.
Hudson Bay Mining and Smelting Co., Limited Head Office P.O. Box 28 Toronto-Dominion Centre Toronto, Ontario M5K 1B8	Flin Flon, Manitoba	75 000	Slab zinc special high grade, high grade, prime western, zinc alloys	Roasting of zinc concentrates followed by leaching and refined zinc production by electrolysis. Cathodes melted and zinc cast in slabs and blocks.

PART 3

METALLURGICAL WORKS IN CANADA
PRIMARY IRON AND STEEL

IRON AND STEEL FURNACES

Pig Iron - Blast and Electric Furnace Plants

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
NOVA SCOTIA				
Sydney Steel Corporation P.O. Box 1450 Sydney, Nova Scotia B1P 6K5	Sydney	820 000	Iron: basic	Two blast furnaces: Fce. 1: Height 89'0", Hearth 20'0", Bosh 25'2", Volume of Stack 24,450 cu ft, Last Rebuilt/Relined 1965/78 Fce. 3: Height 91'0", Hearth 21'6", Bosh 24'6", Volume of Stack 23,500 cu ft, Last Rebuilt/Relined 1973/73 Eight stoves: total heating surface 1,216,870 sq.ft. Three blowing engines (one Ingersoll, 50,000 cfm @ 30-lb pressure; one Ingersoll, 60,000 cfm @ 30-lb pressure; one Brown Boveri, 60,000 cfm @ 30-lb pressure) one gas cleaning plant
		545 000	Coke	No. 5 Battery - Koppers: No. of Ovens 53 No. 6 Battery - Koppers: No. of Ovens 61
QUEBEC				
QIT-Fer et Titane Inc. P.O. Box 560 Sorel, Quebec J3P 5P6	Tracy	578 000 (specialty pig iron)	Special pig iron in conjunction with the production (SOREL) (titanium dioxide) slag	Nine special electric ilmenite-smelting furnaces.
Sidbec-Dosco Incorporated P.O. Box 100 Contrecoeur, Quebec J0L 1C0	Contrecoeur	1 200 000	Reduced pellets	Two Midrex direct reduction modules.
ONTARIO				
Algoma Steel Corporation, Limited, The Steelworks Division Sault Ste. Marie, Ontario P6A 5P2	Sault Ste. Marie	3 700 000	Pig iron: basic, malleable and foundry	Five blast furnaces: Fce. 3*: Height 88'0", Hearth 18'6", Working Volume 21,215 cu ft, Last Rebuilt/Relined 1964/69 Fce. 4: Height 85'0", Hearth 17'3", Working Volume 16,810 cu ft, Last Rebuilt/Relined 1979 Fce. 5: Height 100'0", Hearth 27'0", Working Volume 45,605 cu ft, Last Rebuilt/Relined 1980 Fce. 6: Height 100'0", Hearth 27'0", Working Volume 45,605 cu ft, Last Rebuilt/Relined 1980 Fce. 7: Height 113'0", Hearth 35'0", Working Volume 85,654 cu ft, Last Rebuilt/Relined 1975(new)/1981

* Not lined.

		657 000	Sinter
		1 662 900 (dry weight)	Coke

Fourteen hot blast stoves:

Fce.	No. of Stoves	Heating Surface in sq ft Total
3		285,296
4	3	303,885
5	3	573,000
6	3	573,000
7	4	1,860,000

Two double strand, pig-casting machines (combined capacity approximately 2,400 net tpd)

Blowing engines:

Unit	Kind	Capacity cfm	Rated Pressure (lb/sq in)
2 Ingersol Rand	Turbo	190,000	30
1 British Thomson Houston	Turbo	85,000	30
1 Brown Boveri	Turbo	140,000	35
1 Brown Boveri	Turbo	174,000	45

One Dwight-Lloyd sintering unit (continuous type sintering machine, 72"x84' over fourteen wind boxes)

Coke Plant:

	No. of Ovens
No. 5 Battery - Koppers	86
No. 6 Battery - Koppers	57
No. 7 Battery - Wilputte	57
No. 8 Battery - Wilputte	60
No. 9 Battery - Wilputte	60
	320

Algoma Steel Corporation, Limited, The
Canadian Furnace Division
Port Colborne, Ontario
L3K 5V8

Port Colborne — 217 700 — Pig iron: basic, malleable, low phosphorus, foundry and silvery

(Operations at this division have been shut down indefinitely)

One blast furnace:

Fce.	Height	Hearth	Working Volume (cu ft)	Last Relined
1	81'6"	17'6"	18,202	1975

Five stoves
One Pittsburgh single-strand, pig-casting machine (capacity approximately 700 net tpd)
One steam-blowing engine, 10,000 cfm @ 5 psi
One turbo-blower, 65,000 cfm @ 30 psi

Dofasco Inc.
Burlington Street East
P.O. Box 460
Hamilton, Ontario
L8N 3J5

Hamilton — 3 193 300 — Pig iron: basic, foundry, malleable

Four blast furnaces:

Fce.	Height	Hearth	Bosh	Volume of Stack (cu ft)	Last Rebuilt/ Relined
1	81'9"	20'9"	24'3"	31,835	(new)1975/81
2	81'9"	20'9"	24'3"	32,454	(new)1956/80
3	108'10½"	21'6"	25'9"	32,346	(new)1960/81
4	120'11"	28'	32'7"	55,654	(new)1970/80

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
ONTARIO (cont'd)				
Dofasco Inc. (cont'd)		1.55 million coke tonnes	Coke	Coke plant: 35.6 meter Didier Flow controlled under jet-ovens Two hundred and eleven ovens, Koppers-Becker, Gun Flue type (one battery of 25 ovens, one battery of 35 ovens, one battery of 45 ovens and two batteries of 53 ovens)
Stelco Inc. Hilton Works Hamilton, Ontario L8N 3T1	Hamilton	3 810 150	Pig iron: basic	Four blast furnaces: Fce. B: Height 89'2", Hearth 19'1", Bosh 23'6", Volume of Stack 23,583 cu ft, Built 1910, Last Rebuilt/Relined 1979/79 Fce. C: Height 99'8", Hearth 24'9", Bosh 29'0", Volume of Stack 37,719 cu ft, Built 1940, Last Rebuilt/Relined 1979/79 Fce. D: Height 104'6", Hearth 29'0", Bosh 33'0", Volume of Stack 52,866 cu ft, Built 1951, Last Rebuilt/Relined 1974/74 Fce. E: Height 105'8", Hearth 32'0", Bosh 38'10", Volume of Stack 72,491 cu ft, Built 1967, Last Rebuilt/Relined 1978/78 Sixteen hot blast stoves: Fce. B: 4 stoves, Size 90' x 21', Heating Surface 483,635 sq ft Fce. C: 3 stoves, Size 100' x 22', Heating Surface 619,084 sq ft Fce. D: 3 stoves, Size 109'6-5/8" x 25', Heating Surface 803,254 sq ft Fce. E: 3 stoves, Size 131' x 30', Heating Surface 1,724,115 sq ft 13 stoves, Heating Surface 3,630,088 Seven blowing engines (two Turbo blowers, 90,000 cfm @ 30 psi; one Turbo blower, 45,000 cfm @ 22 psi; one Turbo blower, 110,000 cfm @ 30 psi; three Turbo blowers, 102,200 cfm @ 40 psi; total rated capacity 641,600 cfm.
		762 000	Sinter	Sinter plant: Screening and sizing plant One strand (6'7" wide) of the Dwight-Lloyd type
		2 154 550 (dry weight)	Coke: (metallurgical, nut, range, pea, blower, breeze)	Coke plant: 347 ovens (one battery of 61 ovens, one battery of 83 ovens, one battery of 47 ovens, one battery of 73 ovens and one battery of 83 ovens)
Stelco Inc. Griffith Mine Red Lake, Ontario POV 2MO	Red Lake	317 500	Reduced iron pellets	SL-RN direct reduction kiln.

Stelco Inc. Lake Erie Works Nanticoke, Ontario N0A 1L0	Nanticoke	987 900	Pig iron: basic, foundry, malleable	One blast furnace: Fce. 1 — Height 123'0" — Hearth 33'9" — Bosh 39'8" — Volume of Stack (cu ft) 75,300 — Built 1980 Three hot blast stoves: Fce. 1 — No. of Stoves 3 — Size 29'6" x 145' — Heating Surface (sq ft) 1,870,300 Two blowing engines (two Turbo blowers, 47,500 cfm) One two strand pig-casting machine Gas cleaning: one dust catcher, one Bischoff scrubber

Steel Furnace Plants

NEW BRUNSWICK

Texas Steel Company of Canada Ltd. P.O. Box 475 St. Stephen, New Brunswick E3L 2X3	St. Stephen	16 300	Steel castings	Brown Boveri 20 tonne electric arc furnace Vacuum process moulding systems Pattern shop Sand reclamation X-ray ultrasonic, magnaflux, dye penetrant, and full layout capability Oil fired heat treatment facility with water quenching

NOVA SCOTIA

Enheat Inc. 100 Main Street Sackville, New Brunswick E0A 3C0	Amherst (Plant 4)	18 150	Ingots	One 8-ton Lectromelt basic electric furnace (4,000 kva)
Maritime Steel and Foundries Limited 379 Glasgow Street New Glasgow, Nova Scotia B2H 5C3	New Glasgow	2 700	Steel and alloy castings	One 4-ton Heroult electric furnace (750 kva) Pattern shop Oil-fired, heat-treating facility with water quenching
Sydney Steel Corporation P.O. Box 1450 Sydney, Nova Scotia B1P 6K5	Sydney	1 000 000	Steel ingots and castings	Three 225-ton, oil-fired, oxygen-lanced, stationary basic open hearth furnaces Two 200-ton, oil-fired, oxygen-lanced, tilting basic open hearth furnaces One 225-ton D-H vacuum degassing unit One 10-ton, direct-arc, 3-phase electric furnace (4,000 kva) (30,000 net tpy) One 450 tpd liquid air process, oxygen producing plant

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
QUEBEC				
Atlas Steels Division of Rio Algom Limited Welland, Ontario L3B 5R7	Tracy	68 000	Stainless steel sheet and strip	One 65-ton, electric furnace (18,750 kva) One 1-strand continuous casting machine for slabs to 5" x 52" One 60-ton V.O.D. vessel
Canadian Steel Foundries Division of Hawker Siddeley Canada Inc. P.O. Box 80, Station M Montreal, Quebec H1V 3L7	5227 Notre Dame St. East Montreal	30 000	Carbon and alloy-steel castings	One 35-ton Heroult electric furnace (12,500 kva) One 20-ton Heroult electric furnace (7,500 kva) One 3-ton Volta electric furnace (2,000 kva) Four induction furnaces (100, 300, 500 and 1,000 pounds)
Canadian Steel Wheel Division of Hawker Siddeley Canada Inc. 1900 Dickson Street Montreal, Quebec H1N 2H9	Montreal	145 150	Ingots and forged steel, railway and transit wheels	Two 60-ton Tagliaferri electric furnaces (17,500 kva each) Three forging presses (1,000, 3,000 and 6,000 tons) Three heat treating furnaces
Colt Canada Inc. Crucible Steel Division Sorel, Quebec J3P 5P2	Sorel	38 100	Alloy, carbon, stainless and tool steels, slabs, billets, rounds, customs forgings	One 40-ton (7,500 kva) and one 15-ton (4,500 kva), Lectromelt electric furnaces One hydraulic forging press (5,000 tons) One hydraulic forging press (2,000 tons) with related forge heating facilities Annealing, quenching and tempering facilities Plano-mills, lathes, cold sawing equipment and deep boring facilities
Dominion Engineering Works Limited P.O. Box 220 Montreal, Quebec H3C 2S5	Lachine	10 000	Carbon, alloy steel castings Gray cast iron (Meehanite) chilled cast iron and nodular iron	Two 20-ton induction melting furnaces (4,500 kw) One 5-ton Lectromelt electric furnace (1,800 kva) One 15-ton Lectromelt electric furnace (3,750 kva) Three annealing furnaces, gas-fired
Griffin Canada Inc. P.O. Box 310 St-Hyacinthe, Quebec J2S 7B6	St. Hyacinthe	47 600	Cast steel railway, transit and industrial wheels, composition brake-shoes	Two 6-ton Swindell-Dressler electric furnaces (3,750 kva each)
Lynn MacLeod Metallurgy Limited P.O. Box 249 Thetford Mines, Quebec G6G 5S9	500 Geo. Smith Blvd. Thetford Mines	5 500	Carbon steel, manganese steel and other abrasion-resistant alloy steel castings	One 3-ton, top-charge, Volta electric furnace (3,000 kva) One 1½-ton, Heroult-type, electric furnace (850 kva)
Midland-Ross of Canada Limited Unitcast Division 455 Belvedere Street Sherbrooke, Quebec J1H 4B7	Sherbrooke	3 300	Carbon and low alloy steel castings	One 3-ton Volta electric furnace (2,000 kva) Annealing, quenching and tempering facilities

Sidbec-Dosco Incorporated Longueuil Works 2555 chemin du Lac Longueuil, Quebec J4N 1C1	Longueuil	300 000	Carbon low and medium alloy continuous cast billets	Two 55-ton Lectromelt furnaces (25,000 kva each) Two 3 strand concast continuous casting machines for billets 100 to 200 mm square
Sidbec-Dosco Incorporated Montreal Works 5870 St. Patrick Street P.O. Box 67 Montreal, Quebec H3C 2R4	Montreal	190 000	Steel billets	One 60-ton Lectromelt electric furnace (30,000 kva) One 4-strand continuous casting machine for billets 80 to 160 mm square
Sidbec-Dosco Incorporated Contrecoeur Works P.O. Box 100 Contrecoeur, Quebec JOL 1CO	Contrecoeur	1 225 000	Steel slabs and billets	Two 150-tons American Bridge electric furnaces (90,000 kva each) Two 120-tons Lectromelt electric furnaces (50,000 kva each) Two 6-strand continuous casting machines for billets 100 mm square to 200 mm square (concast) One 1-strand continuous casting machine for slabs 180 m to 1 500 mm
Sorel Steel Inc. 160 Roi Street Sorel, Quebec J3P 4N5	Sorel	12 000	Carbon steel, manganese steel and other abrasion-resistant alloy steel castings	One 4-ton Lectromelt electric furnace (1,500 kva) One 8-ton Swindell electric furnace (3,500 kva) Heat treating and quenching equipment, pattern shop, testing facilities
Stelco Inc. McMaster Works Contrecoeur, Quebec JOL 1CO	Contrecoeur	254 000	Continuous cast billets	One 88-ton American Bridge electric furnace (40,000 kva) One continuous casting machine, 4 strands (3½", 4" and 6" square) billets
ONTARIO				
Algoma Steel Corporation, Limited, The Steelworks Division Sault Ste. Marie, Ontario P6A 5P2	Sault Ste. Marie	3 600 000	Carbon and alloy steel ingots	Five basic oxygen furnaces (L-D) Number of Furnaces: 3 — Kind: Basic oxygen (L-D) — Average Size Heat (net tons): 105 Number of Furnaces: 2 — Kind: Basic oxygen (L-D) — Average Size Heat (net tons): 260 One 4-strand continuous casting machine for blooms from 10½"x9" to 10½"x14" One 2-strand continuous casting machine for slabs up to 30" wide and various H-shaped sections One 2-strand continuous casting machine for slabs 8" thick x 40" to 85" wide
Atlas Steels Division of Rio Algom Limited Welland, Ontario L3B 5R7	Welland	317 500	Carbon, alloy and stainless steel ingots. Continuously cast carbon, alloy and steel slabs and billets	Two 60-ton electric furnaces (30,000 kva each) One 25-ton electric furnace (15,000 kva) One 60-ton vacuum oxygen refining system One 1- or 2-strand continuous casting machine for billets 4" to 8½" square and slabs to 6 5/8" x 24" One 30-inch and one 40-inch consumable electrode vacuum arc melting furnaces

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
ONTARIO (cont'd)				
Black Clawson-Kennedy Ltd. 1144 - 1st Avenue West Owen Sound, Ontario N4K 5P9	Owen Sound	5 100	Carbon, alloy steel castings Stainless steel, grey iron, ductile iron, Ni-resist castings Nonferrous casting	One 4-ton Lectromelt electric furnace (2,000 kva) One 1½-ton Volta electric furnace (800 kva) One 3,000-lb 400-kva indirect-rocking arc electric furnace One 1,600-lb 300-kva and one 300-lb 300-kva high frequency, induction melting furnaces
Burlington Steel Division of Slater Steel Industries Limited 319 Sherman Avenue North Hamilton, Ontario L8N 3P9	Hamilton	310 000	Continuously cast carbon and low alloy steel billets	Two 33-ton Heroult electric furnaces (15,000 kva) One 53-ton Heroult electric furnace (28,000 kva) Two 3-strand continuous casting machines for billets 4"x6¼", 5"x7" and 4" square
Canada Alloy Castings, Ltd. 529 Manitou Drive Kitchener, Ontario N2C 1S2	Kitchener	2 040	Carbon, low alloy and high alloy steel castings	One 1,000-lb induction furnace (350 kw) One 2,000-lb induction furnace (350 kw) One 3,000-lb induction furnace (700 kw)
Dayton-Walther Company Limited 355 Silvercreek Parkway Guelph, Ontario N1H 1E6	Guelph	12 700 21 000	Carbon and steel castings Iron castings Ductile iron	One 1,500 kva induction furnace One 2,500 kva induction furnace Two 3,500 kva induction furnaces One 4,000 kva acid, arc furnace
Dofasco Inc. Burlington Street East P.O. Box 460 Hamilton, Ontario L8N 3J5	Hamilton	4 047 000 (steel ingots) 68 040 (castings) 770	Steel ingots and castings and alloy-steel ingots and castings High alloy steel castings	One 250-ton basic oxygen steelmaking furnace (L-D) #2 melt shop Three 150-ton basic oxygen steelmaking furnaces (L-D) #1 melt shop Two 100-tpd, one 400-tpd, and one 150-tpd liquid-air process, oxygen-producing plants One 2½-ton (1,800 kva) Lectromelt electric furnace Two 10-ton, Volta 3-phase electric furnaces (6,000 kva) One 300-lb, one 1,000-lb and one 2,000-lb induction furnaces
Esco Limited Hope Street South Port Hope, Ontario L1A 3W4	Port Hope	8 200	High and low alloy steel castings	One 5-ton Lectromelt electric furnace (2,000 kva) Heat treating facilities

Fabramet Limited Wyandot Street P.O. Box 1700 Orillia, Ontario L3V 6L6	Orillia	13 600	Heat and corrosion resisting high alloy, steel castings carbon and low alloy, steel castings abrasion resisting and manganese, steel castings	One 2-ton and four 1-ton acid electric arc furnaces One ½-ton acid electric arc furnace One 2-ton basic electric arc furnace One 3-ton acid/basic electric arc furnace One 1100 kva induction furnace with two 1-ton pots One 500 kva induction furnace with two 1-ton pots One 250 kva induction furnace with two 0.3-ton pots One 175 kva induction furnace with two 0.4-ton pots
Lake Ontario Steel Company Limited Hopkins Street South Whitby, Ontario L1N 2C3	Whitby	455 000	Carbon and low alloy steel billets	Two 65-ton electric furnaces (45,000 kva each) Two 3-strand continuous casting machines for billets 5½", and 5" x 7 3/8" One 130-ton electric furnace (95,000 kva) One 4-strand continuous casting machine for billets 5½" and 5" x 7 3/8"
Stelco Inc. Hamilton Works Hamilton, Ontario L8N 3T1	Hamilton	5 261 650	Carbon and alloy steel ingots	Five basic open-hearth furnaces (four 315-ton and one 500-ton) Three 140 NT basic oxygen steelmaking furnaces Five 170 NT, eight 200 NT and ten 240 NT mixer-type ladle cars
Stelco Inc. Lake Erie Works Nanticoke, Ontario N0A 1L0	Nanticoke	1 164 800	Carbon and low alloy steel continuous cast slabs	Two 250 NT basic oxygen steelmaking furnaces One 2-strand continuous casting machine for slabs (30" to 74" wide x 7.9" and 9.5" thick)
Welmet Industries Limited 317 King Street West P.O. Box 370 Welland, Ontario L3B 3K2	Welland	15 600	Stainless and heat-resistant high alloy steel, manganese and carbon steel castings, ductile iron castings Stainless steel valves	One 6-ton electric furnace (3,000 kva) One 3½-ton electric furnace (1,500 kva); one 2-ton electric furnace (1,500 kva) One 500-lb induction furnace; one 300-lb induction furnace One 8-ton electric furnace (2,500 kva)
MANITOBA				
Griffin Canada Inc. P.O. Box 310 St-Hyacinthe, Quebec J2S 7B6	Winnipeg	63 500	Cast steel freight car wheels	Two 8-ton Heroult electric furnaces (5,000 kva each)
Hudson Bay Mining and Smelting Co., Limited P.O. Box 1500 Flin Flon, Manitoba R8A 1N9	Flin Flon	73	Iron, steel and brass castings	One ½-ton, Lectromelt electric furnace (500 kva total) One 250-lb, oil-fired, crucible furnace
Manitoba Rollings Mills (Canada) Limited A unit of Amca International Limited Box 2500 Selkirk, Manitoba R1A 2B4	Selkirk	275 000	Carbon-steel and low alloy-steel billets	One 50-ton electric furnace (36,000 kva) One 50-ton electric furnace (12,500 kva) Two 2-strand continuous casting machines for billets 5" to 8" square

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
SASKATCHEWAN				
A-1 Steel and Iron Div. Ardiem Industrial Corporation 822 - 51st Street East Saskatoon, Saskatchewan S7K OX8	Saskatoon	5 000	Stainless, manganese carbon, low alloy, ductile iron, nickel alloy	Three 2,000 lb. induction furnaces Heat treat facilities Complete quality control department
Interprovincial Steel and Pipe Corporation Ltd. P.O. Box 1670 Regina, Saskatchewan S4P 3C7	Armour Siding, Regina	680 000	Steel ingots	One 40-ton Heroult electric furnace One 100-ton Heroult electric furnace One 125-ton Empco U.H.P. furnace One 140-ton Empco U.H.P. furnace
ALBERTA				
Irving Industries (Foothills Steel Foundry Division) Ltd. 6711 Fairmount Drive S.E. Calgary, Alberta T2H OX6	Calgary	3 600	Mild, low alloy, manganese and stainless steel, Ni hard castings	One 2½-ton, basic, electric furnace (1,000 kva) One 1½-ton, acid, electric furnace (750 kva) One Jarrell-Ash spectrometer
Stelco Inc. Edmonton Steel Works P.O. Box 2348 Edmonton, Alberta T5J 2R3	Edmonton	263 100	Continuous cast billets	Two 75-ton electric furnaces (45,000 kva each) One continuous casting machine, 3 strands (4¼" to to 8" square) billets
Western Canada Steel Limited 450 Southeast Marine Drive Vancouver, British Columbia V5X 2S9	52nd St. & 26th Ave. S.E., Calgary, Alta.	100 000	Steel ingots	One 30-ton electric furnace (10,000 kva)
BRITISH COLUMBIA				
A-1 Steel Div. Ardiem Industrial Corporation 1660 Station Street Vancouver, British Columbia V6A 2Y1	Vancouver	11 000	Carbon, low alloy Hadfield manganese, stainless steel castings and brass aluminum	One 5-ton basic-lined electric furnace (4,000 kva) Complete quality control department Spectrometer Pattern shop Machine shop Four gas-fired furnaces for nonferrous metals
Cae Machinery Ltd. 3550 Lougheed Hwy. Vancouver, British Columbia V5M 2A3	Vancouver	6 000	Mild, alloy, stainless steel castings Ductile iron castings Iron castings	One 3-ton, basic-lined, direct arc, electric furnace (1,500 kva) One 1-ton, basic-lined, direct-arc, electric furnace (900 kva)

Esco Limited 1800, 1055 West Hastings Street Vancouver, British Columbia V6E 2H4	Port Coquitlam	11 000	High and low alloy steel castings Stainless steel castings Hadfield manganese	One 5-ton Lectromelt electric furnace (4,500 kva) One 2,000 lb induction furnace (300 kva) One 1,000 lb induction furnace (300 kva) Heat treating facilities
Highland Foundry Ltd. 9670 187th Street Surrey, British Columbia V3T 4W2	Surrey	2 720	Stainless, heat resistant, HSLA, carbon and manganese steel castings, iron, ductile iron, nickel alloys	One 2,000 lb coreless induction furnace (500 kw) One 1,200 lb coreless induction furnace (350 kw) One 1,200 lb coreless induction furnace (250 kw) Two 600 lb coreless induction furnaces (125 kw) One 250 lb coreless induction furnace
Reliance Foundry Company Limited 7764 - 129 A Street North Surrey, British Columbia V3W 4H7	North Surrey	4 000	Mild, low alloy, stainless and manganese steel castings and malleable iron castings	One 3-ton, Lindberg Hevi-duty, top-charge, direct arc electric furnace with interchangeable (one acid, one basic) furnace shells (1,200 kva)
Victoria Machinery Depot Co., Limited P.O. Box 670 Victoria, British Columbia V8W 2P3	Victoria	2 800	Alloy, mild steel and iron castings	One 1½-ton, acid-lined, electric furnace (500 kva) One 2-ton, acid-lined, electric furnace (500 kva)
Western Canada Steel Limited 450 Southeast Marine Drive Vancouver, British Columbia V5X 2S9	Vancouver	175 000	Steel ingots	One Rokop 4-strand continuous casting machine 5½" to 8" square One 80-ton electric furnace (36,000 kva)

STEEL ROLLING MILLS

NOVA SCOTIA

Enheat Inc. 100 Main Street Sackville, New Brunswick E0A 3C0	Amherst (Plant 4)	18 150	Concrete reinforcing bars, merchant bars, survey stakes and caps	Heating furnaces: One continuous, oil-fired, billet heating furnace, hearth size 12' x 26' One continuous, oil-fired, reheat furnace, hearth size 7' x 8' Mills: One 16", 2-stand, 3-high, bar mill and one 9", 4-stand, 3-high, guide mill (combined mill)
Sydney Steel Corporation P.O. Box 1450 Sydney, Nova Scotia B1P 6K5	Sydney	816 500	Blooms, billets, slabs, rails, tie plates, mine arch, mine arch splice bars and bars	Heating furnaces: Two-coke-oven-gas and/or oil-fired continuous heating furnaces Sixteen single, coke-oven-gas and/or oil-fired soaking pits One bloom reheat furnace, coke-oven-gas and/or oil-fired

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
NOVA SCOTIA (cont'd)				
Sydney Steel Corporation (cont'd)				Mills: One 40", 1-stand, 2 high, reversing blooming mill One 16", 7-stand, 2-high, continuous billet mill One semi-continuous bar mill with 12", 6-stand, 2-high roughing and three trains of 2 stand each 10½" and 9½" finishing One 28" rail mill consisting of 3-high roughing, 3-high intermediate and 2-high finishing One rail finishing mill; includes a vertical and horizontal roller rail straightener, four milling and drilling machines, three saw and drill machines, one hydraulic press and one gag press One continuous casting machine
QUEBEC				
Atlas Steels Division of Rio Algom Limited Welland, Ontario L3B 5R7	Tracy	67 500	Stainless steel sheet and strip in widths up to 48"	Hot mill: One 52" hot planetary mill Cold mills: Two 50" Sendzimir mills for cold sheet and strip (clusters of 20 rolls with 2½" work rolls) One 2-high temper mill Two horizontal anneal and pickle lines One vertical bright anneal furnace Equipment for edging, slitting, grinding, polishing and cutting
Sidbec-Dosco Incorporated Longueuil Works 2555 chemin du Lac Longueuil, Quebec J4N 1C1	Longueuil	272 000	Merchant and reinforcing bars, structural sections	Heating furnaces: One continuous gas-fired walking beam furnace Mill: One Birdsboro continuous 16 strand bar mill 3-21" stands 2 horizontal 1 vertical 3-17" stands 2 horizontal 1 vertical 4-14" stands 3 horizontal 1 vertical 6-12" stands 3 horizontal 1 vertical 1 convertible 6-12" stands 3 horizontal 1 vertical
Sidbec-Dosco Incorporated Montreal Works 5870 St. Patrick Street P.O. Box 67 Montreal, Quebec H3C 2R4	Montreal	270 000	Merchant and reinforcing bars, structural sections Cold-forged bolts, hi-strength bolts Heavy and fine, high and low carbon wires, steel nails Continuous buttweld pipe and nipples	Heating furnaces: One continuous gas- or oil-fired furnace Mills: One 18", 4-stand 3-high, 1-stand 2-high merchant mill Wire plant: High- and low-carbon wire mills and wire galvanizing Pipe mill: One continuous buttweld pipe mill (3/8" through 4" range) Galvanizing pan Nipple shop

Sidbec-Dosco Incorporated Contrecoeur Works P.O. Box 100 Contrecoeur, Quebec J0L 1C0	Contrecoeur	300 000 round products 400 000 flat products	Merchant reinforcing bar in bar form and in coils, controlled cooled rods in coils; hot and cold rolled sheet and strip	Rod and Bar mill: One continuous gas- or oil-fired billet heating furnace One 24-stand, continuous rod and bar mill Two Schloemann controlled cooling lines Two pouring reels, 350' hot bed Hot mills: One rotary-hearth slab heating furnace One reheating slab furnace One 45" x 110", 2-high, reversing universal breakdown mill with one 44" x 30" vertical edger One 27" and 49" x 66", 4-high, reversing hot strip mill with hot coilers including hydraulic automatic gauge control Cold mills: One coil build-up line One combination blast cleaning and pickling line One 50" Sendzimir mill for cold reduction of sheet and strip with 3" work rolls One rewind and cleaning line Single-stack annealing facility One 31" x 56", 2-high, temper mill One cold rolled slitting line Two shear lines
Stelco Inc. McMaster Works Hamilton, Ontario L8N 3T1	Contrecoeur	208 650	Merchant bar, reinforcing bar, light structural shapes and special sections	18" finishing mill, three 3 high 18" roughing stands and one 2 high 18" finishing stand 12" finishing mill, four 2 high 12" finishing stands
ONTARIO				
Algoma Steel Corporation, Limited, The Steelworks Division Sault Ste. Marie, Ontario P6A 5P2	Sault Ste. Marie		Steel products: ingots, blooms, billets and slabs, wide flange shapes, welded wide flange shapes, H bearing piles, standard angles, channels and beams, elevator tees, zees, heavy and light rails, tie plates and splice bars, hot-rolled bars, reinforcing bars, forged steel grinding balls, grinding rods, hot-rolled sheet, cold-rolled sheet and strip Plate: sheared and gas cut - universal mill - floor	Soaking pits: 21 regenerative 60 tons Nine recuperative 100 tons one-way top-fired Nine recuperative 120 tons one-way top-fired Six recuperative 140 tons one-way top-fired Heating and annealing furnaces: Two walking beam, non-recuperative for 166" plate mill and 106" strip mill Two continuous, non-recuperative for 46"-122" plate mill Two continuous, non-recuperative for 30" rail and structural mill One continuous, non-recuperative for 18" merchant mill One rotary, non-recuperative for splice bar mill One continuous, non-recuperative for bar and strip mill Five-hearth, non-recuperative for ball mill Seven Lee Wilson, bell-type for 30" cold mill Seventeen Salem Ludwig, bell-type for 80" cold mill

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
ONTARIO (cont'd)				
Algoma Steel Corporation, Limited, The (cont'd)				Blooming mills: One 45", 1-stand 2-high, reversing blooming mill One 46", 1-stand 2-high, reversing slabbing mill Plate mill: One 52" x 126", 1-stand, 2-high reversing rougher mill One 40" x 67" x 166", 1-stand, 4-high reversing finishing mill Billet mill: One 25", 6-stand, 2-high horizontal and 2-stand, 2-high, vertical continuous billet mill Rail and structural mills: One 32", 1-stand 2-high reversing breakdown mill One 30", 2-stand 3-high and 1-stand 2-high cross country mill One wide flange beam mill comprised of one 50" universal roughing mill, one 36" edging mill and one 50" universal finishing mill Welded wide flange beam mill: One 24" to 72" line with two submerged arc Automatic welding machines (operated by Amca International Limited) Merchant bar and light structural mill: One 18" 4-stand (three 3-high and one 2-high) cross country mill Combination bar and strip mill: One 22" x 36", 5-stand 2-high; one 16" x 30" 2-stand 2-high; one 14" x 30" 4-stand 2-high and one 12" x 30", 2-stand 2-high continuous bar mills One 24", two 16" and two 12" vertical edgers One 22" x 36", 5-stand 2-high; one 16½" x 32" x 36" 2-stand 4-high and 15 1/16" x 32" x 36" 4-stand 4-high continuous flat rolled strip mills; one 24", two 16" and two 12" vertical edgers Wide hot strip mill: One 30½" and 61" x 106", 6-stand 4-high continous mill Cold mills: One 20½" and 61" x 80" 1-stand 4-high reversing cold reduction mill One 23" and 61" x 80" 1-stand 4-high reversing temper mill One 12" and 33" x 34" 1-stand 4-high reversing cold reduction mill One 22" x 33½" 1-stand 2-high single pass temper mill Grinding ball mill: One, five lines

Atlas Steels Division of Rio Algom Limited Welland, Ontario L3B 5R7	Welland	315 000	Tool, alloy, carbon and stainless steels: bars, billets, hollow and solid rock mining drill steel, machinery steels Stainless steel: hot-rolled sheets to 60" wide and strip to 18" wide, plate to 72" wide, and bar, wire and special forged and machined sections	Heating furnaces: Seventeen 1-hole, oil- or gas-fired, soaking pits One oil- or gas-fired continuous billet-heating furnace One oil- or gas-fired low/high zone walking beam billet heating furnace Four 6-door, oil- or gas-fired, heating furnaces One rotary-type, heating furnace, oil- or gas-fired Seven batch-type, heating furnaces, gas-fired One gas-fired, continuous, slab-heating furnace Mills: One 26" 1-stand, 2-high, reversing blooming mill One 22" 1-stand, 3-high, billet mill One 16"-10" 13-stand, 3-high, merchant bar mill (2-18", 4-16", 2-10") One 16"-10" 7-stand, 3-high, merchant bar mill (2-16", 5-10") One 2-stand, 2-high, 29" x 60" hot sheet mill One 32" x 20" hot planetary strip mill One 22½" x 30" 2-high, hot-finishing strip mill Three 19" Sendzimir cold strip mills One 18" x 24" temper strip mill Forging heating furnaces: Two 6-door, three 2-door and one 1-door, oil- or gas-fired furnaces Four 4-door, two 3-door and two 2-door, oil- or gas-fired heating furnaces Forging equipment: One 1,200 ton steam-operated, forging press One 12,000 lb, one 8,000 lb, one 4,000 lb One 2,000 ton hydropneumatic forging press Heat treating furnaces: One continuous bright-anneal electric furnace for strip (vertical) Twenty-nine oil- or gas-fired, car-type furnaces One electric, double-chamber, car-type furnace Two 2-chamber, electric pit-type, tube annealing furnaces One bell-type, gas-fired, heat-treating furnace Four electric salt-bath furnaces Four electric muffle furnaces Two vacuum furnaces, electric heated for coil products Two continuous, gas-fired, strip anneal furnaces Two salt Descale gas-fired pots One sheet anneal furnace, roller hearth, gas-fired Five car bottom tip-up furnaces

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
ONTARIO (cont'd)				
Burlington Steel Division of Slater Steel Industries Limited 319 Sherman Avenue North Hamilton, Ontario L8N 3P9	Hamilton	260 000	Low alloy, special bar and merchant quality steels, steel rounds, squares, flats, special shapes. Concrete reinforcing bar. Forged steel grinding balls	Heating furnace: One gas-fired walking beam furnace Mills: One 30" 1-stand, 2-high, bloom breakdown mill One 21" 1-stand, 3-high, bloom breakdown mill Two 16" in line roughing stands Six 14"/12" stands in line Two Hill-Acme grinding ball machines
Courtice Steel Limited 173 Baseline Road East, Bowmanville, Ontario L1C 3L4	Bowmanville	46 000	Special Bar Quality and low alloy bars. Concrete reinforcing bars. Rounds, squares, flats, angles, channels and special shapes	Heating furnace: One gas-fired pusher type Mills: Two 14" stands 3-high roughing Five 10" stands 3-high cross-country Two 9" stands 2-high finishing
Dofasco Inc. Burlington Street East P.O. Box 460 Hamilton, Ontario L8N 3J5	Hamilton		Steel plate, skelp, hot-rolled sheets, coils and strip, galvanized sheets and coils and strip; cold-rolled sheets, coils and strip; electrical sheets, coils and strip; enamelling sheets, coils and strip; blue plate; electrolytic tin plate, sheets and coils; tin-free steel, sheets and coils; tin mill black plate, sheets and coils; precoated steels	Heating furnaces: Fifty soaking pits, gas- and oil-fired Mills: One 45" x 88" slabber One 38" x 66", 1-stand 2-high roughing mill One 28" x 52" x 66", 4-high, 7 stand hot strip mill One 16" x 43" x 42", 4-high, reversing cold-rolling mill One 11" x 31" x 34", 4-high, reversing cold-rolling mill One 11½" x 34" x 36", 4-high, reversing cold-rolling mill One 21½" x 56" x 56", 4-high, 5-stand, continuous cold-rolling mill One 16½" x 54" x 66", 4-high, reversing cold-rolling mill One 14" x 56" x 56", 4-high reversing cold-rolling mill One 16½" x 58" x 56", 4-high reversing cold-rolling mill One 24" x 60" x 72", 4-high, 5 stand, continuous cold-rolling mill Pickling and cleaning equipment: One 54" continuous pickling line One 74" continuous pickling line One 72" continuous pickling line One 42" electrolytic cleaning line One 72" electrolytic cleaning line Annealing furnaces: Two continuous electric annealing furnaces Sixty-seven gas-fired annealing furnaces and 6 open coil annealers with a total of 185 bases

				Cold finishing mills: One 2-stand, 4-high, temper mill 21½" x 56" x 56" and 21½" x 56" x 56" stands One 2-stand, 4-high, temper mill 12" x 42½" x 42" and 18½" x 43½" x 42" stands One 1-stand, 4-high, temper mill 18" x 48" x 66" One 1-stand, 4-high, temper mill 21½" x 56" x 66" Coating equipment: Three continuous electrolytic tinning lines (one 36" and two 45") Four Armco Sendzimir-type, continuous galvanizing lines (two 60" and two 48") Electrical steel facilities: Two 48" continuous annealing lines One continuous combination heat-treating and varnish-coating line (core-plate line) Forty-seven annealing furnaces with 64 bases for high-temperature annealing One tunnel furnace line
Eastern Steelcasting Division of Ivaco Inc. P.O. Box 510 L'Orignal, Ontario K0B 1K0	L'Orignal	300 000	Billets	Heating furnaces: Two electric furnaces Caster: One 4-strand continuous caster
Ivaco Rolling Mills Division of Ivaco Inc. P.O. Box 322 L'Orignal, Ontario K0B 1K0	L'Orignal	450 000	Wire rods	Rolling mill: Two-strand
Lake Ontario Steel Company Limited Hopkins Street South Whitby, Ontario L1N 5T1	Whitby	384 000 470 000	Special bar quality carbon and low alloy bars Concrete reinforcing bars, merchant mill products, low alloy bars, grader blades and structural angles and channels	Heating furnaces: Two gas- or oil-fired pusher type reheat furnaces One Structural Mill: Four 16", 2-high roughing stands Two 14", 2-high intermediate stands Four 16", 2-high finishing stands One Continuous Bar Mill Four 21", 2-high horizontal roughing stands Three 21", 2-high vertical roughing stands Six 16", 2-high intermediate stands Four 13", 2-high finishing stands
Stanley Precision, Inc. 65 Imperial Street Hamilton, Ontario L8L 7V2	Hamilton	80 820	Cold-rolled strip steel	Furnaces: Six-electric annealing furnaces (15 bases) Four gas-fired furnaces (14 bases) Mills: One 9" x 24" x 24", 4-high, reversing mill One 12½" x 16", 1-stand, cold-rolling mill One 12½" x 16", 2-stand, tandem, cold-rolling mill

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
ONTARIO (cont'd)				
Stanley Precision, Inc. (cont'd)				Three 48" slitting lines including one at Pointe Claire, Quebec One 6" straightening, edging and cutting line Two 18" slitting line Two 12" oscillating slitting lines One 24" slitting line One 6" coil edging line One 12" cutting line Four 12' squaring shears including two at Pointe Claire, Quebec Two 4' squaring shears including one at Pointe Claire, Quebec One 24" strapping slitting line One 10 strand strapping heat-treat line One 330 x 420 x 1 067 mm 6-high reversing mill
Stelco Inc. Hilton Works Hamilton, Ontario L8N 3T1	Hamilton		Blooms, billets, slabs, wire rods, hot-rolled products including carbon and alloy merchant bars, bolt, nut and spike, rods, light structural shapes, railway spikes, tie plates, reinforcing bars, washers, etc. Ships, tank structural sheared and universal plate Hot rolled coils, sheet and strip; cold-reduced including galvanized coils, sheet and strip; blackplate coils, sheet and strip; electrolytic tinplate coils, sheet and strip	Heating furnaces: Thirty-seven 2-hole rows of soaking pits Five oil- or gas-fired, continuous bloom and billet heating furnaces Seven oil- or gas-fired, continuous slab heating furnaces Mills: One 46", 2-high, universal slabbing mill with 36" vertical edgers on entry side One 44", 1-stand, 2-high, reversing blooming mill One 34", 1-stand, 2-high, reversing blooming mill One 18", 8-stand, 2-high, continuous billet mill, including 2-stands of vertical edgers One 54", 1-stand reversing bloom mill One 30"-24", 6-stand, 2-high continuous billet mill including 3-stands of vertical edgers One rod mill, 2-high, continuous, 19 horizontal, 2 vertical, 32 finishing stands One 12"-10", 14-stand, 2-high, continuous bar mill (twelve 12", two 10") One 12"-10", 10-stand, 2- and 3-high, bar mill (two 18" and two 16", 2-high, two 13", 3-high, two 13" 2-high, two 10" 2-high) One 10"-9", 8-stand, 2- and 3-high, bar mill (three 10" 3-high, three 10" 2-high, two 9" 2-high) One 20", 3-stand, 2- and 3-high, bar mill (two 20" 3-high, one 20" 2-high)

One 148", 2-stand, reversing plate mill (one 2-high, one 4-high)
One 110", 1-stand, 4-high, reversing breakdown mill for 56" hot strip mill
One 56", 6-stand, 4-high, continuous hot strip mill
One 56", 5-stand, 4-high, cold reduction mill
One 56", 1-stand, 4-high, reversing cold reduction mill
One 80", 4-stand, 4-high, continuous cold reduction strip mill

Spike department:
One natural gas fired spike rod reheating furnace
Three spike-making machines (cannot be worked simultaneously)

Washer department:
Four washer-making machines
One punch press

Tie plate-finishing:
One punch press

Strip, sheet, and tin plate processing pickling machines:
One batch pickler
Three continuous pickling lines (two 56", one 80")

Galvanizing lines:
Two 48" continuous galvanizing lines
One 60" continuous galvanizing line

Tin plate lines:
One 38" electrolytic tinning line
Two 45" electrolytic tinning lines

Cold finishing, etc.
One 60", 1-stand, 2-high, skin mill
One 56", 2-stand, 4-high, tandem continuous temper mill
One 56", 1-stand, 2-high, cold finishing mill
One 56", 1-stand, 4-high, continuous temper mill
One 80", 1-stand, 4-high, continuous temper mill

Cleaning line:
One 45" electrolytic cleaning line

Treatment furnaces:
Twenty-eight gas-fired, 4-pile coil radiant tube annealing covers (66 bases)
Four gas-fired, radiant tube, sheet annealing furnaces
One gas-fired, sheet-normalizing furnace
Two continuous tin plate annealing lines
Six gas-fired, 1-pile coil radiant tube annealing covers (18 bases)

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
MANITOBA				
Manitoba Rolling Mills (Canada) Limited A Unit of Amca International Limited P.O. Box 2500 Selkirk, Manitoba R1A 2B4	Selkirk	250 000	Steel reinforcing merchant bars, flats, rounds, squares, angles, etc.	Heating furnaces: Split hearth walking beam fired with natural gas Mills: 1 continuous mill comprising: 1-2 high reversing rougher - 24" 8 stands 26" x 28" x 16" (6 horizontal, 2 vertical) intermediate 6 stands 12" (4 horizontal, 2 vertical) finishing 2-20" horizontal stands 6-15/18" stands (2 vertical, 4 horizontal)
SASKATCHEWAN				
Interprovincial Steel and Pipe Corporation Ltd. P.O. Box 1670 Regina, Saskatchewan S4P 3C7	Armour Siding, Regina	680 000	Steel plate, skelp, strip, hot rolled sheets, plates and coils	Heating furnaces: Fourteen 100 ton gas-fired soaking pits Mills: One 46" x 120" high lift 2-high combination plate and slabbing mill One 29" and 49" by 79" 4-high reversing hot strip mill with hot coilers One 28" x 63" x 80" 4-high reversing hot strip mill with hot coilers One 72" x 3/8" sheet and plate cut to length line One 72 x ½" coil slitting line
ALBERTA				
Stelco Inc. Edmonton Steel Works P.O. Box 2348 Edmonton, Alberta T6E 2A0	Edmonton	213 200	Full range of merchant mill steel products	Heating furnace: One double-row, gas-fired, walking beam furnace, 60 tph Mills: One 21/18", 6-stand, 2-high roughing mill One 14/12", 5-stand, 2-high intermediate mill One 18/14", 3-stand, 2-high intermediate mill One 12/14", 3-stand, 2-high finishing mill One 19" vertical edger Three grinding ball mills 1" to 5"
			Grinding balls	
Western Canada Steel Limited 450 Southeast Marine Drive Vancouver, British Columbia V5X 2S9	52nd St. & 26th Ave. S.E., Calgary	90 000	Concrete reinforcing bars	Heating furnace: Gas-fired with a capacity of 40 tph Mills: One 20", 1-stand roughing mill One 16", 1-stand, roughing mill One 14", 5-stand, finishing mill

BRITISH COLUMBIA

Western Canada Steel Limited 450 Southeast Marine Drive Vancouver, British Columbia V5X 2S9	Vancouver	120 000	Merchant bars, concrete reinforcing bars, light structurals	Heating furnace: One double-row, natural gas fired 50 tph walking beam furnace Mills: One 18", 2-stand, 2-high tandem roughing mill One 16", 2-stand, 2-high tandem roughing mill One 16", 1-stand, 3-high, intermediate roughing mill One 12", 4-stand, 3-high, merchant mill One 12", 1-stand, 2-high, merchant mill

COLD DRAWN STEEL PLANTS

ONTARIO

Atlas Steels Division of Rio Algom Limited Welland, Ontario L3B 5R7	Welland	35 000	Cold-finished carbon, alloy and stainless steel bars. Finished as cold-drawn, cold-drawn and ground, turned and ground, turned and polished	Cold drawn equipment: Two coil heat-treating furnaces, gas-fired Two strand, heating furnaces, gas-fired Two hood-type controlled atmosphere gas-fired annealing furnaces for coils Fifteen single-type blocks One continuous-type block One 50,000 lb drawbench One 250,000 lb triple drawbench Three centreless bar turners Nine centreless grinders Four straighten and cut machines Four bar straighteners Two polishers Cleaning equipment: Two 2-strand continuous pickling lines for strip Two shot blast lines for slabs and bars
Stelco Inc. Canadian Drawn Works 155 Chatham Street Hamilton, Ontario L8N 3T1	Hamilton	54 430	Cold-finished carbon, leaded, alloy steel bars and shafting; cold-drawn, cold-drawn and ground, turned and ground, turned and polished	Four continuous drawing lines Two drawbenches Two turning and polishing machines Four centreless grinders Two controlled atmospheric annealing furnaces
Union Drawn Steel Company, Limited 1350 Burlington Street East Hamilton, Ontario L8N 3A2	Hamilton	45 360	Cold-finished carbon and alloy steel bars in rounds, hexagons, squares and flats. Finished as cold drawn, turned and polished, and ground and polished	One continuous drawing line Three drawbenches One coil block Three straighten and cut machines One turning and polishing machine One annealing, car-type furnace Four centreless grinders

Operator	Location of Plant	Annual Capacity (tonnes)	Product	Principal Equipment
FERROALLOY PLANTS				
NEWFOUNDLAND				
ERCO Industries Limited 2 Gibbs Road Islington, Ontario M9B 1R1	Long Harbour	68 000 (phosphorus)	Ferrophosphorus and phosphorus	Two furnaces (60 megawatts each)
QUEBEC				
Chromasco Limited 130 Adelaide Street West P.O. Box 1160 Station A Toronto, Ontario M5W 1G5	Beauharnois	60 000	Ferrosilicon: 50%, 75%, 80% and 85%, ferromanganese, silicomanganese, magnesium ferrosilicon	Two special design, electric furnaces (7,000 kva each) One special design, electric furnace (18,000 kva) One special design, electric furnace (24,000 kva)
Eldorado Gold Mines Inc. 2147 Portage Avenue Winnipeg, Manitoba R3J 0L5	Duparquet	8 100	Molybdenum oxide, ferromolybdenum	
ERCO Industries Limited, 2 Gibbs Road Islington, Ontario M9B 1R1	Varennes	23 000 (phosphorus)	Ferrophosphorus and phosphorus	Two 20,000 kva phosphorus furnaces
SKW Canada Inc. 4045 Côte Vertu Boulevard Montreal, Quebec H4R 1R6	Bécancour	27 000 23 000	Ferrosilicon: 50%, 75% Silicon metal	Three furnaces two 20 megawatt, one 30 megawatt
Unicorn Abrasives of Canada Limited Division Fusion du Saguenay Arvida, Quebec G7S 4K6	Arvida	450	Byproduct ferrosilicon: 12-16% grade	Six 5 ton special electric furnaces (approximately 500 kva each) Two casting furnaces
Union Carbide Canada Limited Metals Division 123 Eglinton Avenue East Toronto, Ontario M4P 1J3	Beauharnois	165 000	Ferrosilicon, 45%, 50%, 75%, 80% and 90% grades. Silicon metal. Other ferroalloys. Ferromanganese and silicomanganese	Two 25,000 kva covered electric furnaces Two special design (15,000 and 18,000 kva) rotating-hearth electric furnaces One 72,000 kva special design electric furnace
	Chicoutimi	22 700	Ferrosilicon, 75% and 85%	One 35,000 kva, special design rotating-hearth electric furnace

ONTARIO

Carborundum Canada Inc. Electro Minerals Division P.O. Box 1007 Niagara Falls, Ontario L2E 6W5	Niagara Falls	10 900	Byproduct ferrosilicon: 15-17% grade	Seven casting furnaces (1,000 to 15,000 kw)
Exolon Company of Canada, Ltd., The P.O. Box 280 Thorold, Ontario L2V 3Z2	Thorold	2 720	Byproduct ferrosilicon: 12-16% grade	Eight 5 ton Higgins furnaces Six casting furnaces (1,300-4,000 kw)
General Abrasive Operations Dresser Canada, Inc. 3807 Stanley Avenue Niagara Falls, Ontario L2E 6T8	Niagara Falls	1 815	Byproduct ferrosilicon: 12-16% grade	Two casting furnaces (3,000 kw to 10,000 kw) One casting furnace (equivalent to four Higgins-type)
Masterloy Products Limited P.O. Box 965 R.R. #6 Ottawa, Ontario K1G 3N4	Doncaster Road Gloucester Township	1 815	Ferromolybdenum, ferrovanadium, nickel-based alloys	Ferroalloys produced exothermically and crucible-melted, nickel-based alloy additives
Norton Company 8001 Daly Street Niagara Falls, Ontario L2G 6S2	Niagara Falls	1 815	Byproduct ferrosilicon: 9-20% grade	Eighteen 5 ton Higgins electric furnaces, one 50 ton electric furnace capacity equivalent to nine Higgins electric furnaces Six casting furnaces (1,000 to 3,5000 kw)

STEEL CONTINUOUS CASTING PLANTS

Company	Location/ Starting Date	Annual Capacity (tonnes)	No. of Strands	Billets, Blooms, Slabs	Ladle Capacity (net tons)/ Type of Mold/ Steel to be Cast
Algoma Steel Corporation, Limited, The	Sault Ste. Marie/ 1967	453 600 for the two machines	4	10¼" x 9" to 10¼" x 14"	110 Curved Carbon, low alloy
	Sault Ste. Marie/ 1968		2	Up to 30" wide and various H-shaped sections	110 Curved Carbon, low alloy
	Sault Ste. Marie/ 1979	907 200	2	8" thick x 40" to 85" wide	260 Curved Carbon, low alloy

Company	Location/ Starting Date	Annual Capacity (tonnes)	No. of Strands	Billets, Blooms, Slabs	Ladle Capacity (net tons)/ Type of Mold/ Steel to be Cast
Atlas Steels Division of Rio Algom Limited	Welland/ 1954	84 820	1 strand for slabs or 2 strands for billets	6¼" to 8¾" square 6 5/8" x 24"	60 Vertical Stainless alloy
	Tracy/ 1964	68 038	1	5" x 39", 5" x 42" 5" x 52"	60 Curved Stainless, carbon alloy
Burlington Steel, Division of Slater Steel Industries Limited	Hamilton/ 1970	310 000	2 machines with 3 strands each	4" x 6¾" and 4" square 5" x 7"	60 Lowhead, curved Carbon, low alloy
Courtice Steel Limited	Cambridge/ 1981	60 000	2	4" square	25 Lowhead, curved Carbon, low alloy
Lake Ontario Steel Company Limited	Whitby/ 1964	455 000	2 machines with 3 strands each	5¼" and 6" square	65 High head, straight Carbon, low alloy
		455 000	1 machine with 4 strands	5¼" and 5" x 7 3/8"	130 Lowhead, curved Carbon, low alloy
Manitoba Rolling Mills (Canada) Limited A Unit of Amca International Limited	Selkirk/ 1966	275 000	2 machines with 2 strands each	5½" to 7 5/8" square	50 Lowhead, curved Carbon, low alloy
Sidbec-Dosco Incorporated	Longueuil/ 1974, 1976	300 000	2 machines 3 strands each	4" to 8" square	65 Curved Carbon, low-medium alloy
	Montreal/ 1965	190 000	4	3½", 4¼", 5 3/8" and 6¼" square	48 Lowhead curved Carbon, low alloy
	Contrecoeur/ 1972	249 480	6	3½" to 7" square	120 Lowhead curved Carbon
		249 480	6	3½" to 4½" square	120 Carbon
		453 600	1	7" x 28/60"	150 Straight with bending Carbon

Stelco Inc. Edmonton Steel Works	Edmonton/ 1974	263 100	3	4½" to 8" square	75 Vertical, bent before cutting Carbon, low alloy
Stelco Inc. McMaster Works	Contrecoeur/ 1974	254 000	4	3½", 4" and 6" square	88/ Lowhead, curved Carbon, low alloy
Stelco Inc. Lake Erie Works	Nanticoke/ 1980	1 164 800	2	30" to 74" wide x 7.9" and 9.5" thick	250 Curved Carbon, low alloy
Western Canada Steel Limited	Vancouver/ 1981	175 000	4	5½" square and 8" square	40 Weybridge vertical with bender Carbon, low alloy One 4 strand curved mold lowhead

STEEL PIPE AND TUBE PRODUCERS

Company	Location of Plant	Annual Capacity (tonnes)	Pipe and Tubing Manufactured (normal end-use notation)	Size Range (O.D. in inches)	Remarks
Algoma Steel Corporation, Limited, The Tube Division Wallace Terrace Sault Ste. Marie, Ontario P6A 5P2	Sault Ste. Marie	255 000	Seamless pipe and tubes, oil well casing, line pipe, standard pipe, mechanical tubing and couplings	4½ - 12¾	One seamless mill
Arc Tube Inc. 59 Industrial Park Sault Ste. Marie, Ontario P6B 5P3	Sault Ste. Marie	4 540	Single wall seam welded steel tubing automotive, refrigeration, etc.	3/8, 3/16, 1/4, 5/16, 3/8	Tube mill Copper cote, terne-cote, plain and arcote
Associated Tube Industries Limited 7455 Woodbine Avenue Markham, Ontario L3R 1A7	Markham	9 000	Stainless steel and nickel alloy pipe and tubing, as welded; welded and drawn and seamless. Heat exchanger, evaporator, ornamental, mechanical, instrumentation. Sheathing for electric range elements. Formed tubular parts	¼ - 4½	16 tube mills, 7 furnaces, 4 draw benches, 3 polishers subsidiary of Samuel, Son & Company Limited, Mississauga
Barton Tubes Limited Box 277 Burlington, Ontario L7R 3Y2	Burlington	40 000	Mechanical	½ - 4	Six high frequency induction weld mills Subsidiary of Barton & Sons, Ltd.

Company	Location of Plant	Annual Capacity (tonnes)	Pipe and Tubing Manufactured (normal end-use notation)	Size Range (O.D. in inches)	Remarks
B.M.F. Condel Inc. 22 Boul. de l'Aéroport Bromont, Québec J0E 1L0	Bromont	15 000	Mechanical and structural	5/8 - 3½	One high frequency induction weld mill.
Brooks Tube Ltd. P.O. Box 1480 Brooks, Alberta T0J 0J0	Brooks	12 000	Welded pipe-line, oil, country and distribution	¾ - 2 3/8	One ERW Mill Subsidiary of Interprovincial Steel and Pipe Corporation Ltd.
Bundy of Canada Limited 316 Orenda Road Bramalea, Ontario L6T 1G3	Bramalea and Cambridge	4 600	Double wall copper-brazed steel tubing; single wall seam welded steel tubing; hydraulic brake tubing system; automotive, refrigeration and plant applications; protective coatings	3/16 - 5/16	3 tube mills Subsidiary of Bundy Corporation, Detroit, Michigan
Canadian Phoenix Steel Products Division of York Russel Inc. 289 Horner Avenue Toronto, Ontario M8Z 4Y4	Toronto	25 500	Spiral-weld pipe	6 5/8 - 86	Three spiral-weld mills Privately-owned
General Instruments of Canada Ltd., Delhi Division 65 Waverly Street Delhi, Ontario N4B 1E8	Delhi	16 500	Pre-galvanized tubing, seam sprayed, flash-in	1 - 3	Two high-frequency induction weld mills
Harrow Tube Division of H.Z. & S. Management Inc. 200 Clark Street Harrow, Ontario N0R 1G0	Harrow	47 000	Mechanical and structural	2 - 5	One high frequency induction weld tube mill
International Parts Manufacturing Limited 111 Manville Road Scarborough, Ontario M1L 4J2	Scarborough	20 000	Tubing for exhaust and tail pipe systems	1¼ - 2½	One electrical induction weld mill Subsidiary of Midas-International Corp. United States

Interprovincial Steel and Pipe Corporation Ltd. P.O. Box 1670 Regina, Saskatchewan S4P 3C7	Regina	18 500	Standard, line and structural tubing	2 3/8	One electric resistance weld mill
		82 000	Standard, line and structural pipe and oil country goods	3½ - 16	One electric resistance weld mill
		140 000	Standard and line pipe	16 - 80	Two double submerged arc spiral weld mills
	Brooks, Alberta	14 000	Standard, line, structural, heat exchanger and boiler tubing	½ - 3	One electric resistance weld mill
	Edmonton	140 000	Standard and line pipe	16 - 80	Two double submerged arc spiral weld mills
		140 000	Standard and line pipe and oil country goods	4½ - 16	One electric resistance weld mill
	Port Moody, B.C.	73 000	Standard, line, structural tubing and oil country goods both black and galvanized	½ - 4½	Two electric resistance weld mills
Prudential Steel Ltd. P.O. Box 1510 Calgary, Alberta T2P 2L6	Calgary	140 000	Standard and line pipe Oil country tubing and casing Hollow structural sections	2 3/8 - 10¾	Two high frequency electric resistance weld mills, pipe casting plant, threading mill and upsetting mill. Subsidiary of Dofasco Inc.
Sidbec-Dosco Incorporated Montreal Works 5870 St. Patrick Street Montreal, Quebec H3C 2R4	Montreal	53 000	Standard and structural	1½ - 4	One continuous buttweld mill; facilities for galvanizing
Siegfried Krieser Industries Limited (M.B.F. Industries Inc.) 60 Signet Drive Weston, Ontario M9L 2Y4	Toronto (3 plants)	50 000	Tubing	5/8 - 4½	Three electric resistance weld mills
		41 000	Mechanical, line, H.S.S., oil country	½ - 4	One high frequency mill
Sonco Steel Tube Limited 14 Holtby Avenue Brampton, Ontario L6X 2M1	Brampton	325 000	Mechanical and structural tubing, standard pipe, water well casing, oil and country	3/8 - 15	Nine electric resistance weld mills (4 structural, 4 mechanical, 1 pipe) with seam annealing finishing floor. Owned by Jannock Limited, Toronto.
Stelco Inc. 155 Chatham Street Hamilton, Ontario L8N 3T1	Camrose, Alta.	164 000	Line	20 - 42	One arc fusion electric weld mill
	Camrose, Alta.	118 000	Standard, line, oil and country	4½ - 16	One continuous electric resistance weld mill

Company	Location of Plant	Annual Capacity (tonnes)	Pipe and Tubing Manufactured (normal end-use notation)	Size Range (O.D. in inches)	Remarks
Stelco Inc. (cont'd)	Contrecoeur, Que.	105 000	Standard, line, mechanical, pressure, structural and hollow structural sections	1/8 - 4	One continuous buttweld mill
	Welland, Ont.	181 500	Line and structural	20 - 36	One u/o double submerged arc weld mill
		544 000	Line and structural spiral-weld	36 - 60	One "Stelform" spiral-weld mill
		113 500	Standard, line, oil country, mechanical, pressure and structural	1/8 - 4	One continuous buttweld mill
		50 000		1/8 - 4½	One seamless mill
		39 500		½ - 4	Four electric resistance weld mills
		256 000	Line, standard and structural	2 3/8 - 16	Two electric resistance weld mills
Standard Tube Canada Inc. P.O. Box 430 Woodstock, Ontario N4S 7Y6	Woodstock, Ont.	120 000	Line, oil country, mechanical, pressure and structural	½ - 8 5/8 shapes to 24" periphery	Five high frequency mills Four electric resistance weld mills Four drawbenches Two annealing furnaces
	Montreal, Que.	16 500	Tubing for furniture, bicyles, etc.	½ - 2½	One electric resistance weld mill One high frequency mill
	Winnipeg, Man.	6 000	Tubing for furniture, farm machinery, etc.	½ - 2½	Two electric resistance weld mills
	Vancouver, B.C.	9 000	Tubing for furniture, fencing, etc.	½ - 3	One electric resistance weld mill
Tubes Solac Limitée 25 Boul. John Kennedy St. Jérôme, Quebec J7Z 5V9	St. Jérôme, Que.	14 000	Mechanical	5/8 - 2	One high-frequency induction weld mill One electric resistance weld mill
Tubular Steel Products Division of Chartcan Inc. 7 Wabush Avenue Toronto, Ontario M6R 1N1	Scarborough, Ont.	27 000	Tubing	3/8 - 3	One electric resistance weld mill Four high-frequency induction weld mills

Walker Exhaust Division of Tenneco Canada Corp. 500 Connestoga Boulevard Cambridge, Ontario N1R 5T7	Cambridge, Ont.	11 000	Tubing for exhaust and tail pipe systems	1½ - 2¾	One high-frequency induction weld mill Subsidiary of Walker Manufacturing Company, United States
Welded Tube of Canada Limited, P.O. Box 89 Concord, Ontario L4K 1B2	Concord, Ont. (2 plants)	300 000	Mechanical, structural and oil country	½ - 10¾ 3/8 - 8 sq. wall thickness .028 - .500	6 mechanical mills 5 structural mills All electric resistance weld
Windsor Tube & Metal Inc. 2125 Ambassador Drive Windsor, Ontario N9C 3R5	Windsor, Ont.	29 000	Mechanical and structural tubing	1 - 3	One high-frequency induction weld tube mill

MAJOR IRON POWDER AND FERRITE PRODUCERS

Company	Raw Material	Type of Process	Annual Capacity (tonnes)	Product	Remarks
Domfer Metal Powders Ltd. P.O. Box 970 Station H Montreal, Quebec H3G 2M9	Steel scrap, with some pig iron and mill scale	Scrap is melted, shotted; shot is screened, ground, decarburized. Powder is pulverized and packaged	18 145	Iron powder for pressing, welding, scarfing, etc.	Original company purchased by Domtar Inc. in 1959. Subsequently purchased by Domfer in 1976, an independent company. 50% expansion 1980.
Quebec Metal Powders Limited Tracy, Quebec J3P 5P7	Molten iron	Molten iron is shotted; shot is decarburized and ground	56 000	Iron powder for pressing, welding, scarfing and miscellaneous applications	Wholly-owned subsidiary of QIT-Fer et Titane Inc. $10 million capital cost.